

UNIVERSITY OF LONDON

A CRITIQUE OF CRITERIA OF TEACHER EFFECTIVENESS

with particular reference to

THE ASSESSMENT OF PRACTICAL TEACHING

by

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ABSTRACT

On the basis of the relevant literature it was established that there was a need to conduct an investigation into the development of criteria of teacher effectiveness in two stages. Phase I of the experiment was designed to examine the effect of using a prepared evaluation instrument (with and without training in its use) on students' self assessments, and tutors' and head-teachers' assessments of students in a teaching practice situation, and on the differences between the assessments made by the three parties concerned.

Early in their practice periods in three widely dispersed colleges, assessments were made by all participants on a defined scale (5 point: A, B, C, D, E without +'s and -'s). Two weeks later "control" groups ('C') made further subjective assessments, "evaluation" groups ('E') used the instrument, and "trained" groups ('T') used the same instrument after training involving the use of a simulated video taped teaching situation.

Appropriate tests and analyses, including a factor analysis, were carried out leading to findings which supported (at an appropriate level of significance) the hypothesis that: differences in the assessment of practical teaching between head-teachers, tutors and students are reduced by the use of a common evaluation instrument, supported by a training session using a video-tape of a classroom situation.

Phase II of the experiment sought further clarification concerning those criteria of specific importance to students, teachers and tutors.

A new sample associated with six teacher training institutions across the country, having shared in the common experience of assessment of practical teaching using the instrument designed for Phase I, weighted the 15 sub-categories (i.e. criteria) on the instrument using a defined five-point scale. The data were processed, and resulting correlation matrices and results of factor analyses tabulated to assist those involved in the planning, implementation and evaluation of professional studies courses in initial teacher training programmes. The computerised results were interpreted to reveal five criteria:

- (i) a 'personality' factor.
- (ii) a factor which emphasised the value of 'personal relationships with children'.
- (iii) a 'preparation and planning' factor.
- (iv) a factor drawing attention to the vital skills of 'organisation and teacher performance'.

and (v) a 'discipline' factor.

Due consideration was given to validity (content, construct, predictive and concurrent validity), and reliability of the evaluation instrument used in the experiment.

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PREFACE

My interest in the assessment of practical teaching was first aroused when I was a student in a teacher training college. Then, during war service with the Royal Air Force, I became particularly interested in the assessment of trainee instructors when a scheme was introduced for educational and vocational training. From about 1947, first as a class-teacher, then as a headmaster and ultimately working in Education Departments of institutions concerned with the education and training of teachers, I developed a desire to investigate this process fully. With the fact in mind that assessment was only worthwhile when provision was made for feed-back which would lead to the ultimate improvement in the student's teaching, I felt that a team-work approach was essential, and that self-assessment by students was an important aspect of this approach. The key to success in this sphere seemed to lie with more adequate liaison between schools and colleges, so that greater understanding and agreement could be achieved between students, head and class teachers, and college tutors.

More recently my interest broadened to include a greater concern for increased knowledge in the field of criteria of teacher effectiveness. Working on the premise that the products of a well designed course of professional studies are teachers capable of engaging effectively in the activity of teaching, I wished to develop a set of criteria for use in the design, implementation and evaluation of such courses, obtaining the necessary data from student teachers in training, teachers in schools and college tutors, who had first shared in the common experience of 'school practice' involving assessment of practical teaching, and in the case of the students, self-assessment.

I wish to pay tribute to the interest that the late Professor J.W. Tibble took in my work in general, and the encouragement he gave me to embark upon research in this field in particular.

* * * *

I would like to thank all those who helped to make this study possible:

- (a) the institutions for teacher education and training concerned, their principal officers, students and all members of academic, technical and administrative staff involved in the work;
- (b) the schools, head-teachers, teachers and pupils concerned, including the headmaster, deputy head and pupils of the school taking part in the simulated video-taped teaching situation;
- (c) Mr. Michael Wild, the senior technician (C.C.T.V.) at the Chelmer Institute of Higher Education;
- (d) all those at the Leicester University Centre at Northampton who contributed to my earlier work, particularly Mr. John Doe;
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- (f) and especially to my supervisor for the present study, Mr. Bill Gibby of the Curriculum Studies Department of the University of London Institute of Education.

* * * *

This thesis uses the main instrument constructed as part of the design for the empirical work in the author's M.Ed. thesis on the Assessment of Practical Teaching (University of Leicester 1972); and incorporates this earlier work to establish the essential foundation for the new investigation.

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REVIEW OF EXISTING RESEARCH

In the years following the publication of the James Report, "Teacher education and training" (H.M.S.O. 1972), those concerned with teacher education have had to face up to many problems, including the reduction of teacher training places, the merging of institutions often with the difficulty of split-site organisation, the establishment of new degree courses, frequently with the attendant problems of modularisation, and of course the controversy over degree validation.

It has been in relation to the validation process that in planning, implementing and evaluating new courses, teacher trainers have been forced to critically examine their whole approach to the initial and in-service education of teachers. In the recommendations of the report of the working group on the B.Ed. of the Advisory Committee on the Supply and Training of Teachers (A.C.S.T.T. 1978), with regard to initial training it is stated that:

Its aim should be to bring the student to the threshold of his career with the basic knowledge, skills and awareness necessary to make a good start, but conscious of the need continually to develop and reassess his performance by whatever means available to him.

and then adds:

Initial training is only one part of the professional preparation of a teacher and needs to be seen as part of the process which also includes

CHAPTER 1

REVIEW OF EXISTING RESEARCH

induction and in-service
training.

In this context, Professor Hoyle (1976) in discussing the professional knowledge and skills required by teachers makes a distinction between what he calls "restricted professionalism" and "extended professionalism".

The former is confined to immediate classroom skills of teaching and class organisation, while "extended professionalism" includes the skills of curriculum design and innovation, organisational and managerial skills required to work with colleagues in determining policy, planning and implementing innovation, together with a knowledge which allows the teacher to see his teaching activities in the broader social context of the school and its community, and in relation to developments within the educational system as a whole. In brief, "restricted professionalism" is the prime concern of initial training, and in-service training should accept responsibility for "extended professionalism".

But perhaps the greatest challenge lies in the field of Professional Studies, where difficulties of definition head a long list of problems which, to name but two more, include the relationship with school experience and the links with other aspects of the initial training course.

It would seem that one fruitful line for investigation could well take advantage of the inescapable link between professional studies courses and school experience, particularly where such courses are 'behavioural skill orientated' or competency based, relating professional studies to the effectiveness of the teacher's performance. Such an approach would be concerned with the immediate classroom skills of teaching and class-organisation, or the 'restricted professionalism' of Professor Hoyle's exposition, and would certainly draw support from the A.C.S.T.T. report.

In defining the composition, structure and broad context of initial training courses, the A.C.S.T.T. report states:

Recently validated B.Ed. schemes which we have examined generally include four components: education studies, professional studies, studies relating to a particular subject or range of subjects, and practical experience.

but goes on to draw attention to the existing diversity in the way the components of professional studies are organised.

Professional studies may be "developmental" in nature, relating to a particular age-range and drawing upon a wide range of concepts and disciplines. Alternatively they may be organised in relation to disciplinary areas, under such headings as 'education psychology', 'the sociology of education' or 'the philosophy of education'. The thematic approach attempts to relate professional studies to such broadly defined areas as 'the developing child' or 'adolescence'; and another pattern structured around the problems arising from the teaching of a particular subject may be labelled 'subject-based'. Lastly comes the organisational method which may be designated as behavioural skill orientated, in other words it is competency based, relating studies to the

effectiveness of the teacher's performance, stressing individualised learning and the need for relevance to the pupil's needs.

If professional studies courses are worth while, they should, without doubt, contribute to the production of competent teachers, and it would seem that if agreement could be reached on the important qualities to look for in an effective teacher, leading to a more efficient system for assessing practical ability in the classroom, then the information obtained in so doing would also contribute to the design and evaluation of the courses themselves.

In "Evaluating the New B.Ed." (S.R.H.E. 1978), with reference to the design and evaluation of professional studies courses, Professor Jim Eggleston states:

I have a commitment to the idea that the products of a course of professional studies are teachers capable of engaging effectively in the activity of teaching, not according to prescription or the dictates of fashion or government committees, but as an intentional activity, rationally based on accepted principles. This seems to me to lead to a set of criteria, which I would want to use in order to evaluate either our own or other professional studies courses.

He then goes on to make suggestions for the formulation of such criteria. Obviously teachers should be able to give an account not only of how they decide what to teach, but how they determine sequence and level both of the subject matter (or content) and of the intellectual demands they made upon their pupils. Moreover, teachers should understand how they attempt to optimise the conditions under which both individuals and groups of pupils learn, knowing how to decide upon teaching strategies and how to structure their interactions with pupils in various classroom transactions. Furthermore, teachers should be

able to explain how they observe, record and evaluate pupils' attainments and progress; how they conceptualise their pupils' characteristics and learning strategies; and how they recognise the potential of subject matter for developing a range of intellectual skills, and its power to generate useful concepts and generalisations. In designing any instrument to aid the process of assessing practical teaching, such criteria would need to be kept clearly in mind.

Writing in the same publication as Professor Eggleston, Professor Ted Wragg (1978) says:

There was a time when preparing novices for the professional side of their job was fairly straightforward. Some agreement existed about what constituted 'effective' teaching, and this might even be encapsulated in an authoritative tome such as the 16th century Jesuit 'Ratio Studiorum'.

and also states:

At the present time the teacher trainer is overwhelmed by conflicting prescriptions of successful teaching, and almost no set of classroom procedures is without its supporters.

Such quotations as these are readily seized upon by those who adhere to the view that it is extremely difficult to draw up a list of criteria of teacher effectiveness, and impossible to satisfactorily assess practical teaching. But so many of those who express views of this kind continue to make assessments of teaching ability based upon criteria which they have been prepared to define.

Peter Miller (1978) said:

The difficulty of defining the 'good' - or the 'effective' - teacher is the same as the difficulty

of defining criteria by which to assess a course designed to produce one. 'Effectiveness' may be a criterion about which more fruitful discussion can occur but its definition will still require judgements too crude to persuade everyone.

It is surely important, despite the difficulty involved, to strive systematically to define what we regard as an effective teacher, and with similar determination pursue the evolution of criteria upon which to base the design, implementation and evaluation of courses of teacher education and training.

In a further comment:

Teacher training is now increasingly a joint enterprise involving both college lecturer and classroom teacher.

however, perhaps Ted Wragg points the way towards a partnership approach to the assessment of practical teaching, from which the beginnings of a clearer definition of criteria of teacher effectiveness may emerge, for as Ian Butterworth (1978) states:

The widening of the scope of students' experience in schools is welcome. A shared understanding of its objectives - of crucial importance for students, tutors and schools - is proving a prerequisite for its effectiveness.

Consequently the question that should be asked is whether in determining critical areas of performance that most clearly differentiate between highly effective and highly ineffective teaching, we are contributing to a method of evaluation for courses (particularly professional studies courses) of initial teacher education.

* * * * *

There has been anxiety in the Colleges about the assessment of school practice, and suggestions have been made from time to time for the improvement of the methods and scales used. (Taylor, W. 1969)

For a great many years those involved in the professional preparation of students for the task of teaching have been concerned, perhaps one may say gravely concerned, about the method of assessing teaching practice within the courses organised in Colleges and Departments of Education.

The task of obtaining meaningful and unbiased assessments of students on teaching practice has always posed difficult problems both for the schools and training institutions. It involves the observation of the student in many different circumstances and the exercise of judgements which are largely intuitive in nature by people who themselves differ in function, attitude and personality.

(Poppleton 1968)

Any investigation in this field could not fail to refer back to the work of Cattell in 1931, who said, "It is increasingly necessary to obtain some relatively objective standard for the assessment of students leaving college". His work, not unexpectedly, is referred to by Evans (1961)*, who, writing thirty years after Cattell, summarises the latter's work as follows:

As a result of an enquiry among administrators, training college and university lecturers, teachers,

* The writings of Evans (1961), Allan (1963) and Cope (1970) not only offered references to Cattell, but provided the author with invaluable bibliographies of British references on the assessment of practical teaching.

students and pupils, a list of twenty-two qualities considered important in teachers was prepared. The relative importance of these qualities in young and mature teachers and men and women teachers was determined, and a rating scale for assessing student teachers was put forward. An abbreviated scale for use in the selection of candidates for training as teachers was also suggested.

A study of the relevant literature seems to point to the need for an instrument which restricts the assessor of practical teaching ability to the consideration of not more than, say, twenty aspects of teaching behaviour which can be clearly listed on one side of a single sheet of paper, with appropriate spaces to enter marks or grades. Such items would need to be sufficiently open-ended in nature, to allow scope for individual interpretation of the observations made, depending upon the viewpoint of the observer, be he teacher, tutor or student. In this way an instrument would cater for the needs of staff and students in the colleges, and heads and class teachers in the schools.

The need for school/college co-operation has been established, but the attendant problems of achieving such participation in partnership are many. In this respect a major study of teaching practice arrangements was undertaken in the University of Bristol Institute of Education with a view to examining the nature of the liaison between school and college staff and different areas of responsibility that exist under varying arrangements.

One area of experiment and investigation in this study was concerned with giving greater responsibility for school practice to the teacher and the schools. This had been recommended in the McNair Report (1944), and reiterated by the Headmasters' Association Report (1965), and Kirwan and

Shaw (1966). The James Report (H.M.S.O. 1972) pursued this theory by recommending the appointment of a professional tutor in each school, and a school-based fourth year of training to be known as the second year of the second cycle. The Bristol Report on "The Functions of School Practice in Courses of Teacher Education" was presented to the Department of Education and Science in 1968, and a publication based on this report was published under the title, "School Experience in Teacher Education" (Cope 1971 a). An extension of the enquiry to investigate "school supervised" practice, and variations designed to develop the liaison between school and college, was completed in September 1970 and the findings were published in 1971 (Cope 1971 b).

Pursuing the partnership theme, some University Departments of Education have schemes whereby members of staff in local schools act as teacher-tutors for the period of school practice, assuming responsibility for supervising students in school (Baker 1967); while heads' views of teaching practice are interestingly revealed in the survey of Griffiths and Moore (1967).

New styles of supervision reported by Eggleston and Caspari (1965), based upon the assessment techniques used in the training of social workers, together with the work of Coltham (1966) and Clark (1967) are indications of the desire to meet the joint demands of supervisory help and assessment, although "the pattern of school practice has remained largely the same for many years, despite the introduction of group practice in which college staff take part alongside students (Collier 1959; Hannam 1967)". (Taylor, W. 1969).

Assessment for assessment's sake is of little value, but assessment which provides adequate feedback to the assessed, leading ultimately to improved teaching is certainly worthwhile. If in the process, the

strengths and weaknesses of teaching performance are clearly conveyed to the student, the next step of encouraging him/her to use his/her strengths to full advantage, and at the same time to seek to remedy any shortcomings, will generally follow given adequate tutorial guidance. There would obviously be distinct advantages to be gained from a system where after using a common carefully devised evaluation instrument, school staff and college staff together discussed their reasons for allocation of grades or marks in the presence of the student. Moreover, if the student had also used the instrument for self assessment, the fruitful nature of the discussions could be further enhanced by a three-way participation.

We have to realise, as Baxter (1950) so aptly states, that:

today's education requires the teacher to be the informed, well-integrated, and far seeing adult member of a children's community. It is no longer enough that the teacher be the possessor of knowledge. Today's teacher must be a 'social engineer' capable of setting up a provocative environment for children's learning, charting the course of each individual child through the ever-changing social relationship in which he is involved and assisting each pupil to grow in his understanding of himself and of others.

The same views are expressed by Simeon (1966) in an article on "Recent Research in the Selection of Candidates for the Teaching Profession".

With this awareness comes a growing understanding of the complexity of the task of teacher evaluation, but the responsibility must not be shirked. Inevitably this leads us into the field of "effectiveness".

In research into teacher competence:

studies have concentrated principally on the personal and behavioural characteristics of teachers, with the secondary aim of developing reliable criteria for the assessment and prediction of efficient teaching.

The identification and analysis of teacher properties, abilities, or characteristics, constitutes the largest area of research; the study of teacher behaviour is a comparatively new field for systematic investigation and remains so far largely an American pre-occupation; and finally there is the problem of evaluation, which is undoubtedly the most intractable, since it rests so heavily on the reliability of the studies subsumed under the first two categories. Tangentially related are the sociological analyses of the teacher's role. (Meldon 1968).

Biddle (1964) states: "not only is the literature on teacher competence overwhelming, but even bibliographies on the subject are becoming unmanageable". He adds that:

Literally thousands of studies have been reported dealing with characteristics of teachers (rated or measured), effects of teaching, goals of education, and other related issues. Yet few if any 'facts' seem to have been established concerning teacher effectiveness, no approved method measuring competence has been accepted, and no methods of promoting her adequacy have been widely adopted.

This sort of evidence lends weight to the arguments of those who wish to dismiss further research into the development of criteria of teacher effectiveness and the assessment of practical teaching, by saying that without doubt, to attempt the overall task, would prove a fruitless exercise. Despite the complexity of the problem, however, it

must be tackled, and both aspects are so closely related that it would be difficult to investigate one without the other. To assess practical teaching more objectively calls for a clearly delineated instrument which lists specific aspects of teaching behaviour which need to be observed carefully and then given assessment grades. In producing such a list, criteria of teacher effectiveness are being spelt out, and in using that list, opinions on relative values of the various items should emerge.

Both Biddle (1964) and Evans (1959) are concerned with definition of "teacher competence". Biddle defines teacher competence as "one or more abilities of a teacher to produce agreed upon educational effects", and teacher effectiveness as "the ability of a teacher to produce agreed-upon educational effects in a given situation or context". Evans on the other hand states, "at the outset a distinction must be made between teaching ability and teaching efficiency or competence. Too often they have been confused and the terms used as if they were interchangeable. This is not the case". As she points out, the possession of high teaching ability does not mean that the possessor will even become a teacher at all, only that the capacity is there, given the desire and the opportunity. She questions whether research on teaching ability is possible, and points out that existing research deals with teaching efficiency rather than teaching ability.

McIntyre (1970), however, is more concerned with the meaning of "assessment", stating that it is a term used in various ways. By way of definition he says:

in assessing a person's behaviour, one is obtaining information about that behaviour which one intends to use, or which one expects others to use, in deciding among a number of courses of action with regard to the person concerned. In so far as the

information obtained is independent of the specific information gathering instrument used, and of the individual using this instrument, and independent of the specific occasion, or sample of behaviour observed, the assessment is reliable. In so far as the information obtained is in fact helpful in choosing the 'best' course of action (i.e. that which comes nearest to achieving one's explicit goals) the assessment is valid.

He continues that, in assessing students' teaching, we may be concerned with any or all of a number of decisions covering the following functions:

- (a) Deciding whether or not a student's teaching is adequate for him to become a certified teacher
- (b) Providing information which will allow employing authorities to select the best teachers available to them
- (c) Deciding whether a student should be advised (or forced) to withdraw from training on the grounds that his teaching is never likely to be such that he will be certificated
- (d) Determining types of schools in which a student should be advised to seek employment, or the characteristics of the pupils he should be advised to teach (and/or providing similar information to employing authorities)
- (e) Deciding what advice to give to a student, or what experience one should seek to give him, in order that his teaching may be improved.

Deciding what advice, and/or what further practical experience a

student should be given in order that his teaching may be improved is of paramount importance, but at the present time most attention is generally given to the first two functions listed by McIntyre, calling for a general evaluation of teaching ability:

The summary of a student's performance in Practical Teaching takes the form, in the majority, if not all of the colleges and university departments, of a letter grade from A to E. Plus and minus refinements are often added to the letter awarded to the students, and translated into a numerical mark. This is a very precise measure of a subjective and imprecise impression.
(A.T.C.D.E. 1962)

This A.T.C.D.E. report adds that such a literal grade may be the summation of subsidiary marks for different aspects of the work, or the result of a total impression. In some cases it is a mark given on a lesson at the end of the teaching practice, or it may be the average of a series of marks throughout the practice. Moreover, it may be an assessment of present performance, or on the other hand contain an element of prophesy. The norms of teaching marks are unstable and their distribution irregular; furthermore they are subjective, for different assessors look for different things, and environmental factors, the school, the class and the teacher cannot be discounted.

The conclusion seems inescapable that complete accuracy of assessment of practical teaching is impossible.
(A.T.C.D.E. 1962)

It is interesting to note that this form of assessment was taken over by most colleges from the earlier procedures of the Board of Education. Upon this system many of the Institutes of Education erected

a machinery for manipulating the teaching marks, elaborating the procedure out of all proportion to the validity of the marks themselves.

The dangers inherent in a system which attempts to assess or predict future performance cannot be over-emphasised; an assessment of present performance provides a difficult enough task, intentionally to attempt to build in an element of prophesy would be a travesty.

The A.T.C.D.E. document then recommends that it is not necessary to draw up lists placing students on a scale in relation to each other; for the traditional calibration of the scale of teaching practice marks (which have been known to consist of nineteen grades) is far too fine for the work that it is called upon to do. It is suggested that the essential issues are: to decide whether the student is to be recommended as likely to be a successful teacher, or whether she has failed, or whether she has shown signs of distinction in her teaching, and as it is important to employing authorities, whether a student is weak or needs careful placing in her first appointment. Only these categories in the assessment of teaching are important and such categories do not need detailed literal or numerical marks. It is also suggested that schemes of assessment for the Education course may easily become self-perpetuating, unquestioned, and a distorting influence upon the development of the course.

The whole object of assessment is to help the lecturers to foster the development of the students, and to ensure that a fair statement of their development may be made to those employing authorities who will be responsible for the first stage of their careers. If the customary practices of assessment fail to achieve these purposes, they will have to be reconsidered in the light of the needs of the

students' development and their future
careers.

(A.T.C.D.E. 1962)

Anders-Richards (1969) has produced a chart showing the grading procedures in use in the Institutes of Education in Great Britain (and a small selection of American Universities). At the time of his writing, of the twenty-two British Institutes listed twelve used a five-point literal scale, five a five-point scale with pluses and minuses added, two a four-point scale (i.e. distinction, good, pass, fail) and three a three-point scale (distinction, pass, fail). At that time, two Institutes were considering a two-point assessment scale: pass/fail.

The use of such scales, however, involves
fundamental problems:

- (1) Different tutors tend to use widely different criteria in evaluating teacher behaviour.
- (2) Comparative ratings such as these can only be based on performance in comparable tasks, which teaching practice does not give.
- (3) The range of skills involved in teaching is so great that differences in 'teaching ability' (however the concept is defined) are clearly multi-dimensional: even with the most objective procedures imaginable, uni-dimensional gradings can at best provide information which bears very little relation to the situation from which it is derived.

(McIntyre 1970)

In 1970, a conference was organised by the Cambridge Institute of Education, on "School Experience in the College of Education Course", and attended by representatives from various sectors of the educational

world, including tutors from a number of Institutes. On this occasion there was an apparent consensus of opinion in favour of the pass/fail grading, placing emphasis on the quality of the assessment made to provide adequate feed-back, as the basis for improved teaching. This called for a system that would clearly indicate both teaching weaknesses and strengths, and also highlight criteria of effectiveness so that students would be able to work towards a soundly based form of self-assessment.

Referring back to McIntyre's third function of assessment, "deciding whether a student should be advised (or forced) to withdraw from training on the grounds that his teaching is never likely to be such that he will be certificated", Cornwall (1958) constructed a sociometric test to help in the prediction of a student's total final performance in a two-year college, and claims that the test discriminates between those likely to fail the course and those who, though weak, may pass if given appropriate help.

McIntyre's final points draw attention to the fact that we are concerned with the dual function of assessment and feedback, and that "if colleges and departments of education are uncertain of the criteria to apply in judging teaching, how can they make decisions about what to include in a teaching course?" (Poppleton 1969).

Indeed, the research proposal put forward by the Working Party set up by the A.T.C.D.E./U.C.E.T. Research Committee (now, with the inclusion of N.F.E.R., known as CRITE), "aims at providing a method of evaluating courses by obtaining a national consensus of objectives in initial training, in terms of the expressed expectations of students, tutors and practising teachers, and by determining critical areas of performance that most clearly differentiate between highly effective

and highly ineffective teaching". (Doe 1970).

It would appear, therefore, that the assessment of practical teaching cannot be studied in isolation, for assessment and training are inextricably interwoven. Neither can we avoid the difficult task of attempting to define the "effective teacher"; both in the design of our courses of professional education and in the supervision of practical teaching we need certain criteria of effectiveness in order to provide the necessary feedback, if we are to improve our courses on the one hand and help our students towards self-improvement in their teaching, on the other.

Cane (1968) reports on the research project concerned with the effectiveness of teacher training, launched under the direction of the late Professor Wiseman, then at the School of Education, Manchester. The team involved was conducting a series of "follow-up" and "follow-back" studies of training college students in a longitudinal study to assess, in the light of subsequent teaching performance, the effectiveness of selection, training and examining. In the first of the reports related to this project, Wiseman and Start (1965) stated that of the teachers who consented to take part, complete data were available for 248, including their performance at the final examination at the training college, the headmaster's report on the teacher five years after qualifying, and details of the teachers' careers. One finding was that there seemed to be little agreement between college assessment and the headmaster's reference after five years. "It may be that the colleges and headmasters are using different criteria in assessing teaching ability and teachers in general." Cane (1968) indicates that the suggestion seems worth further investigation, if only because an explanation may help both tutor and headmaster as they make their

contributions to teacher training. Wiseman and Start add, however, "... differences between the colleges' and headmasters' assessments were to be expected, but it is the magnitude of such differences that is surprising". Start (1966) reiterates that "it would seem that important differences might exist between the ratings of student teachers by their training staff, and those of practising teachers by their headmasters"; and Bach (1952) found no relation whatsoever between ratings of various aspects of teaching given by supervisors and those given by school principals four months after the students had started teaching. Morrison and McIntyre (1969) say it is likely that college supervisors tend as a group to stress different qualities from those which are seen to be important by the schools. Moreover, Finlayson and Cohen (1967) pursue this theme: "tutors in colleges of education may have one frame of reference from which to view the teachers' position, while head-teachers in schools have another", developing an hypothesis of two frames of reference, closely related to Gross's idea (1965) that taking up a professional appointment in schools should be considered as part of a two-phased process of socialisation.

The first or preparatory phase is the period of formal training, when the skills, knowledge, values and attitudes prescribed for entry into the post are taught. Presumably during this time, students will have internalised an ideal conception of their role as a teacher. The second phase of training, that of organisational reality begins when the student confronts the complex realities of organisational life and finds that theory and practice are rather different things.

(Gross 1965)

Cohen (1965) refers to Merton (1957)⁺: "Merton's discussion of

⁺Merton, R.K. (1957) Social Theory and Social Structure. Glencoe Free Press 1957. pp. 368-374.

role-set provides (a) a valuable frame of reference in the design of an investigation concerned with varying expectations held for the teacher position by three members of the role-set (heads, tutors and students), (b) it suggests that differing expectations may be supplied by different role definers, and (c) it emphasises the benefits that accrue when all members of a role-set have a common knowledge of the differences in expectations for a position occupant".

The selection of students for teacher training would appear to fall outside the scope of the present study; and yet concern with prediction of teaching effectiveness as well as its measurement seems to call for some brief mention in this area. A great deal of research has been done on the problems of selection* and prediction⁺. Allen, M. (1956) correlated final teaching marks with group and individual selection procedures. Warburton, Butcher and Forrest (1963) found that the best single predictor of the teaching mark was Cattell's 16 P.F. questionnaire and Tarpey (1965) also found that there were some significant correlations between Cattell's 16 P.F. questionnaire and the teaching mark. Burroughs (1958) suggests that, within its own limitations, the interview is as good a predictor of teaching success as most other measures, while Halliwell (1965) found the College Interview Rating to be one of the most important predictors of success in the training course.

Perhaps it is not surprising that interview ratings correlate well with teaching marks within colleges; a detailed analysis and comparison of the assessment of students at the pre-training interview and on school

* Dale (1955), Halliwell (1965), Simeon (1966)

⁺ The Study by Cole (1961) is worthy of note

practice might reveal common ground between these assessments in individual colleges. It is likely that a fair proportion of this common area would be assessment of personality and attitudes.

(Cane 1968)

In the United States of America a great deal of research has looked at the relationship between personality, training and experience and effective teaching (Taylor 1969), but Evans (1951) has warned us that "the results are not always directly applicable in this country". The value of such research to those investigating the assessment of practical teaching is best expressed by Getzels and Jackson (1963):

Despite the critical importance of the problems and a half century of prodigious research effort, very little is known for certain about the nature and measurement of teacher personality, or about the relation between teacher personality and teaching effectiveness. The regrettable fact is that many of the studies so far have not produced significant results. Many others have produced only pedestrian findings. For example, it is said after the usual inventory tabulation that good teachers are friendly, cheerful, sympathetic and morally virtuous rather than cruel, depressed, unsympathetic and morally depraved. But when this has been said, not very much that is especially useful has been revealed. For what conceivable human interaction ... and teaching implies first and foremost a human interaction ... is not the better if the people involved are friendly, cheerful,

sympathetic and virtuous rather than the opposite?

(Getzels & Jackson 1963)

American practice has tended towards the construction of rating forms and classroom observation schedules which vary from the very thorough study of Ryans (1960) to what Biddle (1964) describes as "a plethora of hastily constructed and unreliable inventories".

Vernon, P.E. (1966) suggests that "a particularly good example of the failure of the empirical approach is supplied by Ryans' (1960) excellent investigation of teacher success". The concept of the "good teacher" is, of course, complex and vague; and hundreds of studies of teacher-selection and teacher competence have broken down through inadequacies in the criterion. Nevertheless, Professor Vernon points out that Ryans arrived at well-defined and usable criteria by careful observation of teachers' behaviour in the classroom situation, and then by carrying out a factor analysis of the data collected. Three factors or dimensions of behaviour were obtained which could be assessed with high reliability:

- | | | |
|---|------|------------------------------|
| X. Understanding, friendly | vs. | aloof, egocentric |
| Y. Responsible, business-like, systematic |) vs | evading, unplanned, slipshod |
| Z. Stimulating, imaginative, enthusiastic |) vs | dull, routine |

Ryans and his colleagues then set out to construct tests which would correlate with or give useful predictions of these criteria. Extremely varied techniques were exploited, including tests of attitudes, biographical inventory items, word association, sentence completion and pictorial situations; the only restriction being that they should be readily applicable in group form, and objectively scorable. Each sub-test, and all the items within each sub-test, were

given repeated trials. Yet the best validation for the combined battery obtained with fresh groups of teachers averaged around 0.37 at the elementary and 0.31 at the secondary levels. And when the tests were applied for predicting success two or three years ahead (e.g. in student selection), the mean correlations with X, Y and Z ratings dropped to around 0.12.

Maybe teacher traits are particularly difficult to assess with printed group tests, or they are greatly affected by situational influences, or are very unstable over the years of teacher training. But similar difficulties are likely to arise in predicting personality characteristics in almost any occupation or educational context. And if Ryans, with considerable financial and staff backing, and with great ingenuity in test construction and psychometric sophistication, could do no better, then the prospects for empirical measurement of personality traits in general, along the lines envisaged by Berg, Guilford or Eysenck, are not very bright.

(Vernon 1966)

Musella (1970) sums up the American research related to Teacher evaluation under the following headings:

- (a) Teacher-Pupil: Cause and Effect: stating that there is considerable lack of confidence in the ability to measure teaching effectiveness by use of student (i.e. pupil) -growth criteria.

Bloom (1963) and Clayton (1965) however, believe that teacher effectiveness can be measured only in terms of learning outcomes.

They contend that teaching has not taken place, unless there is evidence of consequent pupil learning. Broudy, Smith and Burnett (1964) are concerned with the measurement of the replicative uses of knowledge (cf. Evans, K.M. (1951), "To credit the teacher with all the learning the children do on any particular subject is to over-rate the teacher. To credit the teacher with only the increases of knowledge shown by the children is also to under-rate the teacher.")

- (b) The Teacher: Musella points out that although there is considerable evidence that particular personality characteristics of teachers have a discernible influence on pupil behaviour, there is little evidence that certain personality characteristics are more desirable than others for teaching in general.

(cf. Vernon, P.E.)

Musella refers to Barr, A.S. and others (1961); Gage, N.L. (1963); Getzels and Jackson (1963); and Silberman (1963).

- (c) The Teaching Process: research in this area has been hindered by the limitations of direct classroom observations:
1. insufficient observation time upon which to base judgement
 2. inadequacy of recorded observations as valid and reliable samples of the total teaching experience of the teacher
 3. uncertainty of the validity and reliability of the observers, assessors, evaluators, judges, raters.

- (d) The Rater: How sure are we that the judgement and decision of the rater are based on the stated criteria? In one study undertaken by

this writer (Musella 1967⁺) it was found that rating, defined as including all the physiological processes that go into the final outcome, is a function, in part, of the perceptual-cognitive style of the individual rater.

One weakness evident in the use of formal rating forms as part of a research design is that regardless of the formal criteria accepted and used one must rely on the rater's perceptual-cognitive view of the ratee, of the criteria, and of the relationship (similarity-difference) between the two.

Musella then suggests that until we have conclusive evidence on certain cause-effect variables, it might be more productive and desirable to direct our efforts towards enhancing and extending opportunity for self-improvement of the teacher.

With this in mind

the super-ordinate rater must:

1. assume the leadership role, but ensure that the development of teacher-effectiveness criteria is a co-operative effort of both rater and ratee.
2. provide the means for describing and categorising the teacher act in terms that the teacher can accept - in other words, terms that do not connote values of effective or ineffective teaching; and
3. provide the teacher with the opportunity

⁺Musella, D. (1967), Open-Closed-Mindedness as related to the Rating of Teachers by Elementary School Principals. Journal of Experimental Education 35, Spring 1967. pp 75-79.

for self-assessment based on the criteria previously decided upon.

He then states that the question at this time is not the universal acceptability of the criteria of effective teaching, nor the acceptance of the criteria by both parties in the particular rating situation; rather, the objective is their awareness and understanding of the stated criteria.

Musella then predicts the results of this type of procedure as:

1. The teacher and rater become the developers of criteria against which certain behaviours are to be assessed.
2. The teacher and rater focus on actual classroom events and specific behaviours, not generalities.
3. There is a reduction in the possibilities for disagreement because of lack of communication.
4. The teacher and rater have a common frame of reference for viewing and judging teaching in terms that are relatively free from connotative value dimensions.
5. The situation, as well as the relationship between rater and ratee, remains relatively free from threat, since references to effective-ineffective teacher behaviours are obtained through one's own perception, and not simply from direction and/or implications presented by the rater.

Cattell (1931) has pointed out that different categories of persons emphasis different qualities, Panton (1934) that standards of assessment of practical teaching varied between colleges; Robertson (1957) that tutors supervising students on teaching practice in any one training establishment may differ considerably among themselves; Wiseman and Start (1965) that the predictive value of such assessments over five

years of teaching is small, and Shipman (1966) that schools differ widely in the qualities of teachers that they regard as important and also in their distribution of gradings.

Shipman (1966) says that college staff are neither in a position to take all relevant factors into account nor to control them, and that students find assessment an additional source of stress, regarding staff more as examiners than guides. He adds that "Teaching Practice marks do not seem to be a measure of true performance, do not influence or predict future success or failure, and interfere with the main purpose of teaching practice", and he suggests that a solution to the dilemma would be an immediate cessation of marking on any but a "pass/fail" and possibly "very-good" basis. Furthermore, he advocates that this should be confined to the early practice only, so that students could be released from this anxiety by the third year.

Evans (1961) has stated that it may well be "that no general assessment of teaching ability is possible", and Poppleton (1968) that "we are chasing an elusive myth, that there are so many variables involved that each situation is different from every other". But Evans (1959) suggested that the opinion of competent observers is the best criterion of teaching efficiency, adding that the obvious way to go about studying teaching ability is to consider various qualities which it is reasonable to expect to find in good teachers, and then attempt to relate them to the level of observed efficiency. We should not, however, overlook the earlier warning (Evans 1951) that due regard must be paid to the variation in a teacher's performance when conditions are varied. Any such assessment should include a statement of the type of pupils, of the size of class, and of the subject matter being taught. Lancelot (1935) and Buckingham (1923) also draw attention to the fact that we must take

into account the number of pupils being taught when estimating the results of teaching

It is not surprising, therefore, that there should be a continuing search for criteria of teaching ability which are capable of reasonably precise definition, and which can be used as the basis of an agreed scheme between all the parties concerned.

(Poppleton 1968)

CHAPTER 2

DESIGN OF THE EXPERIMENT

If we accept Poppleton's view (1968) that there should be a continuing search for criteria of teaching ability which are capable of reasonably precise definition, and which can be used as the basis of an agreed scheme between all the parties concerned (i.e. the headteachers, experienced class teachers, college tutors and students), our first task is to construct an instrument made up of such criteria. We can take heart from Professor William Taylor's (1969) advice that there is perhaps a need for us to be bolder in identifying the kinds of effectiveness that we want in the teacher; and at the same time bear in mind Musella's comment (1970) that it is not the universal acceptability of the criteria by all parties in the particular rating situation, but rather the awareness and understanding of the criteria that is important.

In this way there should be, as Musella suggests, a reduction in the possibilities for disagreement because of lack of communication; the student, the head or class teacher and the tutor can then focus on actual classroom events and specific behaviours rather than generalities, having a common frame of reference for viewing and judging teaching in terms that are relatively free from connotative value dimensions. In this context the student and the rater may well become the developers of criteria against which certain behaviours are to be assessed.

The present study investigates the possibility of devising a procedure which could be followed by both the schools (heads and/or experienced teachers) and the colleges (college tutors and the students themselves), using an instrument designed to meet the following conditions:

- (1) it would be planned in sufficient detail to cover what in the first instance may be regarded as the essential factors for effective teaching, without

going into the minutiae of some existing rating forms;

- (2) it would act as a device for ensuring adequate communication between schools and colleges, in order that all participants in the evaluation procedure might direct their classroom observation (or in the case of students, self-criticism) in the same direction;
- (3) it would involve the use of a five-point scale (A,B,C,D and E) for assessment, without the complication of extending the scale by the use of +'s and -'s.

It was hoped that this approach to assessment would be less subjective than a global intuitively based grading, for in seeking to direct classroom observation in specific directions it would enable heads, teachers, tutors and students to compare their decisions in defined areas, and would have the advantage of emphasising the strengths and weaknesses of the student's technique. Adequate feed-back could thus be provided to act as a basis for the improvement of the student's teaching.

It would seem that in addition to this there is need to investigate some form of training in the use of such an instrument. This procedure would have several advantages. First, it could help to make explicit some of the assumptions underlying the global assessments being made, and clarify in the minds of school staff and college tutors the basis on which their assessments could be made. Secondly, it could also be used in any induction courses for newly appointed college staff. Moreover, it would ensure a team-work approach to assessment involving not only the

schools but the students themselves.

An experiment designed to investigate the assessment of practical teaching, and then by developing the link between professional studies courses and practical teaching experience to seek increased knowledge in the field of criteria of teacher effectiveness, called for a procedure divided into two distinct phases. The first stage of the experiment would be to investigate the assessment of practical teaching, followed by a second stage seeking to arrive at a set of criteria for use in the design, implementation and evaluation of professional studies courses.

The first phase of the pilot scheme experiment was based on the considerations outlined so far in this chapter and carried out at College 1, leading ultimately to a fuller investigation at Colleges 2 and 3.

Furthermore, it seemed appropriate with the development of an instrument covering the essential factors for effective teaching, and its use in the "team-work" context, to enable the participants to draw upon this experience to "weight" the instrument by indicating the degree of importance they would each attach to the various categories listed.

For this second aspect of the investigation, the pilot scheme drew upon the "weighting" of the evaluation instrument by students, tutors and heads, whereby the varying degrees of importance attached to each sub-category were subjected to appropriate statistical analysis to draw out criteria considered particularly important by all parties concerned in their separate and conjoined groups. The data for the main study of this work were collected between 1972 and 1978 from heads or class teachers, tutors and students associated with various teacher training institutions in England. After using the instrument for penultimate or final teaching practice assessment, they rated the various categories

of teacher performance listed on a five-point scale.

It was considered important that all parties concerned (students, tutors and teachers) should have shared in the common experience of teaching practice, using the evaluation instrument produced for Phase I, before indicating the varying degrees of importance they attached to the fifteen sub-categories (i.e. criteria) numbered 1a to 5c on that instrument.

As independent respondents, each student, tutor and teacher would be asked to "weight" the criteria on the following scale:

- 5 indicates EXTREMELY IMPORTANT
- 4 indicates VERY IMPORTANT
- 3 indicates OF AVERAGE IMPORTANCE
- 2 indicates OF LESS THAN AVERAGE IMPORTANCE
- 1 indicates OF CONSIDERABLY LESS THAN AVERAGE IMPORTANCE

It was realised that there may be a danger among those using the scale to reduce its scope by a natural tendency to avoid the extreme categories (i.e. "extremely important" and "of considerably less than average importance"), and that steps should be taken to discourage such action.

THE RESEARCH DESIGN

It was necessary to bear in mind the possibility that colleges and headmasters use different criteria in assessing teaching ability (Wiseman and Start 1965); that different categories of persons emphasise different qualities (Cattell 1931); that tutors supervising students on teaching practice in any one establishment may differ considerably among themselves (Robertson 1957), and that schools differ widely in the qualities of teachers that they regard as important, and

also in their distribution of gradings (Shipman 1966).

Assuming that the differences between head-teachers' and tutors' assessments (and students' self-assessments) of practical teaching need not be as great as existing research findings suggest (e.g. Wiseman and Start 1965, Finlayson and Cohen 1967), the following hypothesis was formulated:

Differences in the assessment of practical teaching between head-teachers, tutors and students are reduced by the use of a common evaluation instrument supported by a training session using a video-tape of a classroom situation.

It was also hoped that the investigation would open up opportunities for a greater understanding of how to develop criteria of effective teaching against which certain behaviours could be assessed, so that if indeed "the difficulty of defining the 'good' - or the 'effective' - teacher is the same as the difficulty of defining criteria by which to assess a course designed to produce one" (Miller 1978), then at least the first move would be made in "a joint enterprise involving both college lecturer and classroom teacher" (Wragg 1978) to establish a set of criteria to be used in the design and evaluation of professional studies courses.

The study calls for co-operation of supervising tutors, headteachers (or experienced teachers appointed for the experiment to deputise for the head), and students on teaching practice. Each case considered would comprise a student, a tutor and a head-teacher.

By random selection (using random sampling number tables) the sample should be divided into three parts:

"C", a control group,

"E", an evaluation instrument group,
"T", an evaluation instrument group, each member
receiving video-tape training in the use of
the instrument.

It was anticipated that as inclusion in the trained group ('T') would entail travelling to the college concerned to receive video-tape training, some teacher participants, particularly those in schools long distances from the college, may not wish to be included in that group. In point of fact, this problem did not arise, and a random selection of groups was possible in all three colleges.

It was planned that all students would assess themselves as well as being assessed by their tutors and the headmasters of the schools in which they were practising.

On the Tuesday or Wednesday of the second week of a four or five week practice, all groups would carry out a global assessment on a subjective, intuitive basis, giving an overall grade of teaching ability on a five-point scale (A,B,C,D,E), using an assessment form (see Appendix I). It would be clearly specified that +'s and -'s would not be used, and for the guidance of all concerned the following suggestions would be made:

"A" should be used for an outstanding student
suitable for the distinction category,
"B" for a good student well above the average
standard,
"C" for an average student,
"D" for a weak student, but one passable as a
future teacher, and
"E" for a failure.

For further guidance the following comments would be added in brackets after the suggestion for each category:

- "A" as a Head, I would appoint this student if a vacancy existed, without bothering to advertise;
- "B" if this student applied for a post, I would consider him/her just as seriously as other applicants with several years' experience;
- "C" if no experienced teachers applied, I would be happy to fill a vacancy with this student;
- "D" if no one applied for a post, I would take this student; and
- "E" I would rather have a perpetual vacancy than take this student to fill a post.

(Teaching Practice Report Form:
University of York Department
of Education)

The decision to augment the original explanations of the five grades (A,B,C,D,E) by the additional comments from the York report form, arose from exploratory discussions with head-teachers (not included in the experiment) who felt the need for amplification of the original comments to assist them in the task of grading. Similar discussions with tutors and students, however, indicated that they both considered the original comments adequate. There seemed to be a danger here of creating a "double scale", but upon reflection, after further discussion with tutors and students not involved in the experiment, the supplementary comments were added. It was decided that in addition to the advantages for the heads concerned, the tutors and students would benefit in making their own "weighting" from an increased understanding of the head's interpretation of the original scale. Nevertheless the duality is open to criticism.

On the Wednesday or Thursday of the 4th week of the practice a second

assessment would be made by all participants; students (self-assessment), heads and tutors in the control group (C) would make their second assessment as out-lined above. The members of the evaluation group (E) would make their assessment using an evaluation instrument (See Appendix I) guided only by the explanatory notes included under the various headings; and the members of the trained group (T) would use the same evaluation instrument after a "training session".

The training session would involve the viewing of a video-taped, simulated teaching situation, (the details of which are given later in this chapter) when heads, tutors and students in the trained group (T) would independently assess the teacher portrayed in the simulation on an intuitive basis (using the five-point scale); then, having been presented with the evaluation instrument, view the video-taped teaching situation again and complete the instrument. Additional information would be provided (see Appendix III) to enable individuals to complete items on the instrument not apparent from viewing the tape.

Information was supplied on personal relationships with colleagues and senior colleagues, personal qualities and professional behaviour, the prevailing conditions in the school, together with a simulated scheme of work and lesson notes for the teacher portrayed on the video-tape. Time would be allowed for questions afterwards. The group would then be supplied with further copies of the evaluation instrument for use in the classroom situation, for the second assessment of the students they had already assessed intuitively in the second week of the teaching practice session.

THE EVALUATION INSTRUMENT

Methods of assessment have varied considerably from college to college; some have used no instrument at all, assessing intuitively with perhaps some preconceived picture of the "ideal" teacher (as exemplified by the following interesting but long quotation from Cohen 1965) in mind:

A teacher maintains a patient, calm attitude in the classroom. He is understanding, tolerant, and sympathetic towards the children in his charge. As an individual, he is conscientious and reliable, self-disciplined and adaptable, has common sense and is stimulating and lively. He has a sense of humour and is approachable to the children. He maintains a happy and permissive climate in his classroom. He is interested in children, has a liking for them, and has a psychological and sociological knowledge of their general growth and development, and their needs. He is an example to his class in his neat, tidy appearance and he is a model for their behaviour both in school and elsewhere. His discipline is firm but kindly and he himself is consistent and impartial, providing a sense of security for the children in his care. His speech is grammatically correct and he has a pleasant, well-modulated voice. His own behaviour and values are governed by clear goals towards which to aim, and are founded upon either a religious or a moral code. He has a sense of vocation and participates in community work with youth clubs and societies. He allows no political views or religious bias to enter into his classroom work. He leads a full life outside his classroom and this is private to the children he teaches, and is certainly not in keeping with the generally held stereotypes of the teacher. He is academically sound and is willing

to try new methods and new approaches. He is physically fit and suffers from no gross physical abnormality.

(Cohen, L. 1965)

Others, of course, have had a more precise approach to this difficult task. Collier (1959) classified the student's qualities as a teacher under three headings:

- (i) management of children,
- (ii) teaching skills,
- and (iii) personal qualities,

and stated that under the first a tutor may look for good discipline or class control, for good rapport with the children, for enthusiasm or liveliness in teaching and for a habit of appreciation of what children offer in their oral, written or practical work. He went on to say that under the second heading the tutor may look for skill in questioning, initiative and imagination in choice of material; thoroughness of preparation, clarity of exposition; skilful use of pictures, school broadcasts and demonstrations; efficient organisation of practical work, skill in eliciting hard work and high quality of performance in children. Finally, under the third heading such qualities as reliability, sincerity, keen co-operation in school activities, acceptability to staff and good appearance may be included.

Pittinger (1917) said that the proper function of a score card for teacher measurement was not to substitute a formula for a supervisor's personal judgement, but to aid him in discovering and assembling all the data upon which intelligent judgement should be based. Evans (1951) suggested that a list of traits to be taken into account in making assessments could ensure that no vital point was overlooked, and added that if a scale was used by a number of independent judges it did ensure

that all the judges were taking into account approximately the same aspects of the teacher's performance.

Furthermore, Vernon (1953) stressed that without listing some ten or more qualities for separate estimation it was unlikely that the rater would spread his assessment over a sufficient range of facets of a student's performance.

By studying research related to criteria of effectiveness, carried out in this country and in the United States of America (e.g. "Wisconsin Studies of the Measurement and Prediction of Teacher Effectiveness" 1961; "Contemporary Research on Teacher Effectiveness", Biddle and Ellena 1964), together with other published work in this field (such as that already referred to above), and examining a variety of rating scales and evaluation instruments, five broad categories emerged as common to all:

1. Personal Relationships
2. Preparation and Planning
3. Classroom Organisation
4. Teacher Performance
5. Personal Qualities

With these headings in mind, the Stones and Morris (1970) survey on "The Assessment of Practical Teaching" provided useful information under the Appendix, "Analysis of Criteria". In this investigation, 188 questionnaires were sent out to Colleges of Education and University Departments of Education; 122 were returned, and among these respondents 51 sent printed schedules and 15 sent detailed lists of criteria. By studying the data collected by Stones and Morris, and then taking cognisance of all the items mentioned by more than 10 institutions of the 66 supplying information in that particular area of their investigation, 15 items emerged capable of being grouped as 3 sub-categories under each of the broad headings already defined. The

outcome resulted in the further development of the instrument for use in this investigation as follows:

1. Personal Relationships

(a) with Pupils:

(Relationship with Class and Individual Children
- 'contact' with pupils)

(b) with Colleagues

(Fellow students in the same school, and other
class teachers in the school.)

(c) with Senior Colleagues:

(Head, deputy, class-teacher of student's
class, tutor: Attitude to criticism and advice.)

2. Preparation and Planning

(a) Planning and Preparation of teaching resources
in general.

(b) Suitability of 'content'

(Student's knowledge and expertise.)

(c) Use of Lesson Note Book.

3. Classroom Organisation

(a) Organisation, distribution and use of material
and apparatus.

(b) Use of Audio/Visual Aids (including blackboard).

(c) Discipline, order and management

(Creating and sustaining interest, stimulating
and handling pupils' responses).

4. Teacher Performance

(a) Presentation of Material.

(b) Flexibility: ability to modify plans to meet
the demands of the situation.

(c) Questioning

(Aptness, framing, distribution, etc.).

5. Personal Qualities and Professional Behaviour

(a) Appearance, bearing, dress.

(b) Voice and delivery, quality of speech.

(c) Contribution to general life of school

(Assumption of additional responsibilities)

and duties. General attitude, regularity of attendance, punctuality, etc.).

This left one important aspect to be dealt with, namely how to make allowance for the specific conditions prevailing in the classroom and school in which the student is teaching. It was decided to ask for a statement of:

- (a) Size of class,
- (b) Age-range of class,
- (c) Ability range,
- (d) Size of school,

and then to ask the assessor to bear these and other relevant prevailing factors in mind, and decide whether the student's task was made:

- (a) very difficult,
- (b) difficult,
- or (c) average;

or whether the conditions:

- (d) facilitated the teaching situation,
- or (e) greatly facilitated the teaching situation.

It was felt that difficulty would be experienced in getting reliable and valid responses to these instructions, but that despite the limitations of the procedure at least a move had been made in the right direction towards a more methodical approach to the measurement of prevailing conditions in classroom and school, and the consequent influence on the quality of the teaching.

The emerging instrument (see Appendix I) called for an A,B,C,D or E grade under each of the sub-categories (numerical equivalents being 5,4,3,2 or 1 point). Under the heading "General Information", (school conditions), "very difficult" was awarded 5 points, down to one point where conditions "greatly facilitated the teaching situation".

Major category grades were obtained by summing the three sub-category grades, dividing by three (to the nearest whole number) and changing to the equivalent letter; and the overall grade by adding the numerical equivalents for all 16 items and by dividing by 16 to the nearest whole number (8/16ths to count as 1 whole), and giving the literal equivalent.

For example, if under the major category of "Preparation and Planning" grades were awarded for the sub-categories as follows:

- (a) Planning and preparation of teaching resources in
general B (= 4 points)
- (b) Suitability of 'content' (student's knowledge and
expertise) C (= 3 points)
- (c) Use of Lesson Note Book
C (= 3 points)

the total points for the major category would be $4+3+3 = 10$, therefore the overall category grade for "Preparation and Planning" would be $10 \div 3 = 3\frac{1}{3}$ (3 to the nearest whole figure) or grade C.

Similarly by summing the numerical equivalent for the 15 sub-category grades 1a to 5c, plus the grade for category 6, if the total was 56 points, the overall teachings mark would be $56 \div 16 = 3\frac{1}{2}$ (4 to the nearest whole figure, $\frac{8}{16}$ and over counting as 1 whole) or grade B.

It was necessary to standardise the procedure for the calculation in this manner for the purposes of the experiment. Using the instrument in a non-experimental situation, however, there would be no need for such calculations, for the value would lie in the individual grades awarded for each sub-category, and the subsequent discussion between the heads or class teachers, tutors and students involved.

SIMULATED VIDEO-TAPED TEACHING SITUATION

Having prepared the evaluation instrument it was now necessary to produce a video-taped teaching situation for common viewing, to be used for practice in the use of the instrument before all parties concerned used it in the actual classroom situation. From previous C.C.T.V. experience, for optimum viewing response it was decided that the viewing time should be approximately fifteen minutes, and in actual fact the video-tape produced has a running time of thirteen minutes.

It was decided that the teaching situation should be simulated, the teacher concerned acting the part of a student on teaching practice, and the class being prepared to a certain extent for a classroom situation not normally expected from their teacher. Having found a headmaster willing to co-operate in the production of such a video-tape, his deputy, an experienced teacher of considerable ability, agreed to act the part required of her and the members of her class were asked if they would like to help in the production.

For the video-tape to serve its purpose in giving assessors experience in using the evaluation instrument, a situation was devised which would produce a state of alertness in the observers because of inconsistent teaching and constantly contradictory factors of good, bad and moderate teaching ability. It was decided not to script the lesson, but to plan with the teacher that at certain stages of the lesson various things would be done intending to reveal good or bad teaching points. The pupils would be warned that the lesson would be unusual, in that their teacher would frequently behave in ways they would not expect, and specific pupils were to be prepared to co-operate in certain devised situations.

On the one hand it was planned that there should be spelling mistakes on the blackboard, that the teacher would be unprepared with her materials (balloons not ready for distribution, no scissors available without sending for them, writing paper unopened); that she would use expressions such as "shut up", "mind your own business"; that she would mislay her spectacles and pen, be inconsistent in her demands, lose her temper, tear up a pupil's work, and so on. On the other hand the teacher would reveal an understanding of her pupils, give encouragement and help where necessary, speak well, give concise instructions, give evidence of sound preparation, question the class ably, remain calm, and maintain a happy classroom. After a great deal of discussion and preparation, the video-tape was produced.

It should be understood, of course, that the simulated video-tape teaching situation, is simply a device to be used for training in the use of the evaluation instrument. The great advantage lies in the fact that it can be re-wound and re-played, and is easily transportable to provide a common experience for all those allocated to the "trained" group ('T') in the experiment.

(A note on the availability of the video-tape is included in Appendix III).

It was realised that not all the information necessary for the completion of the evaluation instrument was available by just viewing the video-taped teaching situation, so additional material was provided on typewritten sheets, including the student's scheme of work and lesson notes, together with information concerning other simulated factors such as personal relationships, personal qualities and professional behaviour (see Appendix III).

THE SECOND PHASE OF THE INVESTIGATION

Further development of criteria of teacher effectiveness:

The original intention behind the plan to "weight" the evaluation instrument used in the pilot study was to obtain relevant information to modify its format for use in the main study. However, the data obtained so obviously pointed towards a refinement of knowledge in the area of criteria that it was decided to subject it to appropriate statistical analysis. It was hoped that this would tease out criteria of specific importance to students, heads or class teachers, and college tutors in their separate groups, all together, and in the student/head or class teacher, student/tutor, and head or class teacher/tutor combinations.

Consequently it was decided to take the pilot study data collected, concerning the weighting of the 15 sub-categories of the instrument, and enter them on punched cards so that a computer could be used to calculate product-moment correlation co-efficients for each of the three samples (heads, students and tutors), and then perform a factor analysis on each correlation matrix.

For the main study it was planned to draw upon teacher-training institutions across the country, where students, experienced class teachers (or heads) and tutors engaged upon penultimate or final teaching practice work would use the instrument for assessment purposes, and then "weight" the fifteen sub-categories using a five-point scale. The procedure has already been described earlier in this chapter. It should be stated, however, that all those taking part in the second phase of the experiment were reminded to be constantly aware of the full range of the five-point scale, when making their decisions for

weighting the instrument. It was pointed out in a note attached to the weighting instructions that just as there was a tendency for some teachers when marking essays on a five-point scale (even with the use of +'s and -'s) to avoid the use of marks in the 'A' and 'E' categories, and thus reduce the marking scale; there may well be a similar desire for respondents to avoid using the extreme gradings (i.e. "extremely important" and "of considerably less than average importance") even when they really considered them appropriate. (See Appendix I).

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CHAPTER 3

THE PILOT STUDY

THE PILOT STUDY

The pilot study was carried out at a College of Education in the south-east of England (mixed, day college with normal aged and mature students), using all third year finalists based at the main college building and carrying out their practice in Junior schools.

Thirty-three tutors, thirty-seven heads (or experienced teachers appointed for the experiment to deputise for the heads), and fifty students were involved. The last minute withdrawal of two students meant that altogether forty-eight cases were considered, each case comprising a student, headteacher and tutor. By random selection sixteen cases were allocated to each group "C", "E" and "T":

"C" being a control group

"E" - a group using the evaluation instrument
for the second assessment

and "T" - a group using the evaluation instrument
for the second assessment, each member
having received video-tape training in
the use of the instrument.

Each head, each supervising tutor and each student involved was sent an explanatory letter, a copy of the general research instructions, and detailed personal instructions relevant to the group in which he/she had been placed (see Appendix II), together with the necessary forms and envelopes for the returns.

The intuitive global assessments for each group were carried out on the Tuesday or Wednesday of the second week of a five-week practice. The video-taped training session for the members of the "T" group was arranged for the latter half of the third week, and the second assessments for all groups were made on the Wednesday or Thursday of the fourth week.

THE VIDEO-TAPED TRAINING SESSION

The video-tape was shown of the members of the "T" group, subdivided for convenience into smaller groups, each comprising students, heads and tutors together in the same room. On each occasion it was explained that the teaching situation was simulated to represent a student carrying out her teaching practice. It was requested that no discussion should take place during the session. After the first viewing, each student, head and tutor was asked to give an intuitive global assessment of the teacher portrayed in the simulation on a five-point scale (A,B,C,D,E without +'s and -'s) using the Assessment Form (Appendix I). All participants, as described above, were then presented with the original version of the evaluation instrument (see Appendix I) and asked to study it in preparation for its use in assessing the video-taped simulation after a second viewing. Further material was then provided (Appendix III) to enable completion of items on the instrument which were not apparent from the tape. After the second showing of the tape and the completion of the instrument, further copies were provided to each student, head and tutor for use in the classroom.

For the purpose of this research project, it was necessary to ensure that exactly the same procedure was followed for each training session with "T" groups throughout the experiment. For the pilot study the video-tape had to be viewed by two groups in different rooms, but at the same time; and later in the main study at College 2, various sessions had to be arranged on different sites at different times to accommodate heads, tutors and students with various time-tabled commitments which prevented them all from being in one place at the same time. At College 3 only two sessions were necessary, a main viewing and a supplementary group to cater for those absent from the first.

Questions with regard to procedure were allowed, but these together with the answers given by the researcher were recorded on a sound tape to ensure that the information given was conveyed to all members of the trained groups.

Discussions between students, heads and tutors could not be allowed at any of the training sessions for the experiment. In normal non-experimental use of the evaluation instrument, including training procedures, the value of discussion, of course, cannot be over-emphasised, for its contribution to increased understanding among all parties concerned with teaching practice and its assessment is paramount.

THE TABULATION AND ANALYSIS OF DATA

As the investigation was concerned with disparity between assessment grades awarded by tutors and head-teachers to students on teaching practice, and the self-assessment grades of the students themselves, it was decided to tabulate the data collected to show the number of agreements between the various parties concerned, so that by inspection increased or decreased numbers of agreements in the various assessments would be apparent.

Considering the overall grades given on both first and second assessments, the data were tabulated as shown in Table I, and it was felt that by using a trend test, any trends in increased or decreased agreements would be revealed. It was decided to use a Jonkheere Trend Test (see Appendix IV). It was important first of all to ensure that there was no significant trend when comparing agreements on the first (intuitive) assessments from groups "C" (control), "E" (evaluation)

and "T" (trained). The test confirmed that there was no significant trend. On the second assessments, however, a significant trend was revealed concerning increase in the number of agreements ($T > C > E$ at the 0.01% level), showing that the use of the evaluation instrument after training in its use, had brought about a measurable increase.

Agreement in the main categories (No.1 to No. 5 on the instrument) were tabulated as shown in Table 2. In order to find whether there were significant increases of agreement on the "T" group returns over those of the "E" group, it was considered necessary to carry out an analysis of variance, and the most appropriate method seemed to be the use of a Kruskal-Wallis one-way analysis of variance by ranks (see Appendix IV). It was revealed that there were significant increases of agreement on the "T" group returns over those of the "E" group. Taking student/head/tutor agreements on their own, significant increase was registered at the 5% level, and then taking student/head, student/tutor and head/tutor agreements together, there was increased agreement for the "T" group significant at the 0.5% level.

Next, agreements in the sub-categories were tabulated (see Tables 3, 4, 5 and 6) and Kruskal-Wallis one-way analysis of variance by ranks used again. This revealed significant increases in agreement for the "T" group over the "E" group. Taking student/head/tutor agreements on their own, significant increase was registered at the 0.5% level. Student/head agreements were significant at the 1% level, and head/tutor agreements at the 0.5% level. Student/tutor agreements, however, were not significant at the 5% level. Taken overall, putting student/head, student/tutor and head/tutor agreements together, the overall increases of agreements for the "T" group over the "E" group were highly significant. (0.01% level).

From these results it was concluded that the hypothesis had been supported to a sufficient degree to suggest that the experiment should be carried out with larger numbers in two other Colleges of Education.

TABLE 1. (COLLEGE 1.)

TABLE OF OVERALL GRADES - ALL GROUPS (1st. & 2nd. ASSESSMENTS).
 SHOWING NUMBER OF AGREEMENTS BETWEEN: (a) STUDENTS, HEADS & TUTORS,
 (b) STUDENTS & HEADS (c) STUDENTS & TUTORS (d) HEADS & TUTORS.

GROUPS	STUDENT/TUTOR/HEAD AGREEMENT 1st. ASSESSMENT (INTUITIVE)	STUDENT/TUTOR/HEAD AGREEMENT 2nd. ASSESSMENT	STUDENT/HEAD AGREEMENT 1st. ASSESSMENT (INTUITIVE)	STUDENT/HEAD AGREEMENT 2nd. ASSESSMENT	STUDENT/TUTOR AGREEMENT 1st. ASSESSMENT (INTUITIVE)	STUDENT/TUTOR AGREEMENT 2nd. ASSESSMENT	HEAD/TUTOR AGREEMENT 1st. ASSESSMENT (INTUITIVE)	HEAD/TUTOR AGREEMENT 2nd. ASSESSMENT	NUMBER OF CASES CONSIDERED
CONTROL "C"	6	7	8	7	8	13	11	10	16
EVALUATION "E"	5	2	5	6	10	7	11	7	16
EVALUATION WITH VIDEO-TAPED TRAINING "T"	7	10	8	11	11	11	11	14	16

TABLE 2. (COLLEGE 1.)

	MAIN CATEGORY AGREEMENTS STUDENTS/HEADS/TUTORS					MAIN CATEGORY AGREEMENTS STUDENTS/HEADS					MAIN CATEGORY AGREEMENTS STUDENTS/TUTORS					MAIN CATEGORY AGREEMENTS. HEADS/TUTORS.				
	*1.	2.	3.	4.	5.	1.	2.	3.	4.	5.	1.	2.	3.	4.	5.	1.	2.	3.	4.	5.
"C"																				
"E"	3	4	6	6	3	7	5	8	8	10	8	9	9	10	6	7	8	9	10	5
"T"	8	4	8	8	11	10	7	11	10	11	12	10	11	11	13	8	7	10	11	14

* MAIN CATEGORIES : 1. PERSONAL RELATIONSHIPS 2. PREPARATION & PLANNING 3. CLASSROOM ORGANISATION
4. TEACHER PERFORMANCE 5. PERSONAL QUALITIES & PROFESSIONAL BEHAVIOUR.

TABLE 3. (COLLEGE 1)

TABLE SHOWING NUMBER OF AGREEMENTS ON SUB-CATEGORIES
BETWEEN STUDENTS, HEADS & TUTORS

	*	1a	1b	1c	2a	2b	2c	3a	3b	3c	4a	4b	4c	5a	5b	5c	6
"E"		3	3	4	3	4	5	5	2	2	6	4	4	3	3	1	2
"T"		6	5	5	5	5	3	6	5	8	7	6	3	7	8	4	4

(SIGNIFICANT DIFFERENCE IN AGREEMENTS AT 0.5% LEVEL)

* SUB-CATEGORIES 1a-5c AS SHOWN ON THE ORIGINAL
EVALUATION INSTRUMENT - SEE APPENDIX I

TABLE 4. (COLLEGE 1.)

TABLE SHOWING NUMBER OF AGREEMENTS ON SUB-CATEGORIES
BETWEEN STUDENTS & HEADS

	*	1a	1b	1c	2a	2b	2c	3a	3b	3c	4a	4b	4c	5a	5b	5c	6
"E"		6	7	6	6	6	10	8	5	6	8	6	7	9	7	8	9
"T"		9	8	10	9	7	9	9	8	9	9	9	7	8	9	8	8

(SIGNIFICANT DIFFERENCE IN AGREEMENTS AT 1% LEVEL)

TABLE. 5. (COLLEGE 1.)

TABLE SHOWING NUMBER OF AGREEMENTS ON SUB-CATEGORIES
BETWEEN STUDENTS & TUTORS

	*	1a	1b	1c	2a	2b	2c	3a	3b	3c	4a	4b	4c	5a	5b	5c	6
E		9	4	10	5	6	6	7	6	6	9	8	11	6	8	8	6
T		11	10	8	8	8	5	8	8	10	10	9	6	10	11	7	6

(DIFFERENCE IN AGREEMENTS NOT SIGNIFICANT AT 5% LEVEL)

* SUB-CATEGORIES 1a-5c AS SHOWN ON THE ORIGINAL
EVALUATION INSTRUMENT — SEE APPENDIX I

TABLE. 6. (COLLEGE 1.)

TABLE SHOWING NUMBER OF AGREEMENTS ON SUB-CATEGORIES
BETWEEN HEADS & TUTORS:

	*	1a	1b	1c	2a	2b	2c	3a	3b	3c	4a	4b	4c	5a	5b	5c	6
E		7	8	6	7	9	6	10	6	6	9	6	5	5	7	2	5
T		8	6	7	8	11	6	10	10	12	11	8	9	11	11	7	7

(SIGNIFICANT DIFFERENCE IN AGREEMENTS AT 0.5% LEVEL)

THE EVALUATION INSTRUMENT

Having decided that individual assessors probably attached varying degrees of importance to both the main and sub-categories of the instrument, the students, tutors and heads involved in Groups "E" and "T" of the pilot study (i.e. those who had used the evaluation instrument) were asked to "weight" the instrument.

Using the scale: 5 indicates EXTREMELY IMPORTANT
4 indicates VERY IMPORTANT
3 indicates OF AVERAGE IMPORTANCE
2 indicates OF LESS THAN AVERAGE IMPORTANCE
1 indicates OF CONSIDERABLY LESS THAN
AVERAGE IMPORTANCE

All participants were asked to indicate the degree of importance they attached to each of the main categories and each of the sub-categories.

As explained in the previous chapter, those involved were reminded of the tendency to reduce the scale by avoiding the use of the extreme gradings (5 and 1), and asked to take cognisance of the full range when awarding individual weighting grades.

They were also asked to list one, two or three criteria (not more) if they felt that such items should have been included in the instrument, indicating the degree of importance of each on the scale already described. Comments on the instrument were also invited. (See Appendix I).

Returns were made by 93 people in all, 31 heads, 31 students and 31 tutors, only one tutor, one head and one student failing to make a return. The majority ratings for the Main Categories were as follows:

1. Personal Relationships	5	(by 67% of respondents)
2. Preparation and Planning	5	(48%)
3. Classroom Organisation	4	(52%)
4. Teacher Performance	4	(48%)
5. Personal Qualities and Professional Behaviour	4	(47%)
6. Prevailing conditions in the specific school and classroom situation	4	(45%)

Continuing in this vein, a simple analysis was made of the material supplied by respondents, looking at totals and calculating percentages. It soon became apparent, however, that more sophisticated techniques would be required (e.g. a factor analysis) to obtain reliable information from the data received. Before the factor analysis was performed, however, certain observations were made, and tentative conclusions formed:

General overall agreement by heads, tutors and students on the degree of importance of the various items was apparent. Concerning the main categories, "Personal Relationships" was given the highest rating (5 by 67%). The students rated "Preparation and Planning", "Classroom Organisation" and "Teacher Performance" higher than heads and tutors did. Tutors did not think consideration of "prevailing conditions in the specific school and classroom situation" merited as high a rating as heads and students did.

With the sub-categories there was once more general overall agreement, high ratings being given for:

- (a) Personal relationships with pupils
(Relationship with class and individual children - "contact" with pupils):

5 (by 91% of respondents)

- (b) Preparation and Planning of teaching resources in general:

5 (60%)

- (c) Discipline, order and management (creating and sustaining interest, stimulating and handling pupils' responses):

5 (75%)

- (d) Flexibility: ability to modify plans to meet the demands of the situation:

5 (58%)

The middle grade, "three" was given to the following:

- (a) Personal relationships with colleagues (Fellow students in the same school, and other class teachers in the school):

3 (by 51% of respondents)

- (b) Use of Lesson Note Book:

3 (45%)

- (c) Appearance, bearing, dress

3 (47%)

Students attached greater importance to "suitability of 'content', student's knowledge and expertise", and "use of audio/visual aids (including blackboard)" than heads and tutors.

From this analysis, together with comments and suggestions from a number of respondents, it was decided to modify the Evaluation Instrument in two places:

1. 1(b) to read:

PERSONAL RELATIONSHIPS

With colleagues

(Fellow students, other class-teachers and non-teaching staff in the same school)

2. 2(c) to read:

PREPARATION AND PLANNING

Use of Lesson Note Book

(e.g. Preparation, planning, records and
retrospective observations evaluating
material, pupils and self)

Of the 31 heads submitting returns, 20 expressed satisfaction with the design of the instrument (10 by direct comment such as "very suitable", and 10 by suggesting no further categories and adding no critical comments). Seven mentioned the student's personal philosophy and its effect upon his/her teaching, but could see no way of satisfactorily assessing it, and four mentioned personality factors. In addition, 20 heads suggested that personal relationships with non-teaching staff in the school were important, and item 1(b) was modified accordingly (see above).

Of the 31 students, 25 added no critical comment and wished to add no further categories. Six dealt specifically with item 2(c) "Use of Lesson Note Book", and this together with similar comments by tutors led to the modification of the instrument with explanatory suggestions in brackets after that heading. Two mentioned items which were already covered by category 6, "prevailing conditions in the specific school and classroom situation", and one mentioned "classroom displays" which it was felt would be adequately covered by 3(b) "Use of Audio/Visual Aids".

Of the 31 tutors, 21 expressed satisfaction with the design of the instrument, 19 by adding no further categories or comments, 2 by stating that they found the instrument "excellent". One called for a simpler instrument, one wished for recognition of pre-college teaching experience, two were concerned with the personal philosophy of the student and its effect upon the teaching ability, and one mentioned personality factors. Again, 10 expressed a need for the amplification of 2(c) "Use of Lesson Note Book".

As far as low ratings were concerned, on the "Use of Lesson Note Book", 9 heads, 5 tutors and 7 students rated at 2 points; one head, one tutor and one student rated at one point. On "Personal Relationships with Colleagues", two heads, one tutor and one student rated at 2 points and one student at one point. On "Prevailing conditions in the specific school and classroom situation", four heads, four tutors and four students rated at 2 points. On "Appearance, bearing, dress", four tutors and one student rated it as low as 2 points, and one student at one point.

THE SECOND PHASE OF THE PILOT STUDY

The data collected from the 93 respondents (31 heads, 31 students and 31 tutors) concerning the weighting of the 15 sub-categories of the instrument were entered on to punched cards so that a computer could be used to calculate product-moment correlation coefficients for each of the three samples and then a factor analysis was performed on each correlation matrix. Principal Components were obtained and the factors rotated to the Varimax (orthogonal) criteria. (See Appendix IV Section (c) Computerised Results (i), Pilot Study Phase II.)

From the results obtained it was concluded that a careful study of each correlation matrix and the corresponding results from factor analysis would lead to an increased understanding of the importance attached to the various criteria of teacher effectiveness by students, teachers and tutors respectively.

As an example, one factor which emerged for each group was what may be described as a "personality" factor, showing the joint importance of:

- (a) personal relationships with colleagues, and

- (b) personal qualities and professional behaviour.

The head-teachers stressed the importance of relationships with colleagues (fellow students, other class teachers and non-teaching staff in the same school); but the tutors placed emphasis of the same order on relationships with senior colleagues (head, deputy, class teacher of student's class, tutor: attitude to criticism and advice). The students, however, considered relationships with both colleagues (sub-category 1b) and senior colleagues (sub-category 1c) of importance; and subsequent inspection of the correlation matrix shows a 1b/1c correlation coefficient of .5113 for the student group.

Moreover, within this factor, head-teachers and tutors considered all three aspects of the personal qualities category important:

- (a) appearance, bearing, dress
- (b) voice and delivery, quality of speech
- and (c) contribution to general life of the school
(assumption of additional responsibilities
and duties, general attitude, regularity of
attendance, punctuality, etc.)

and linked these qualities to the importance of "planning and preparation of teaching resources in general". For their part, however, the students did not attach similar importance to "voice and delivery, quality of speech" and "planning and preparation of teaching resources in general" within this specific factor.

A second factor, however, revealed by statistical analysis as common to each group was a "suitability of content" factor, stressing the importance of the "student's knowledge and expertise" (sub-category 2c). Tutors related it to "presentation of material", head-teachers to "discipline, order and management - creating and sustaining interest,

stimulating and handling pupils' responses", and students to both these items and also to "voice and delivery, quality of speech".

These two examples arising from analysis of the data collected from the small-pilot study sample pointed to the need for a larger study of weightings awarded by students, teachers and tutors who have first shared in the common experience of assessment of practical teaching using the Ellis Evaluation Instrument.

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CHAPTER 4

THE MAIN STUDY

PHASE I

As the pilot-study had indicated the potential value of the evaluation instrument and demonstrated that the experimental procedure appeared to be viable, it was decided that apart from minor additions to the instrument the same procedure would be adopted for the main study. In view of the suggested diagnostic value of the instrument, however, it seemed more appropriate to use students on their second teaching practice rather than final year students, as eventually the evaluation instrument would probably be used more effectively if introduced in the middle (or second) block of their three teaching practices.

It appeared desirable to vary the geographical area covered by the study by including two further colleges, one in the Midlands (College 2) and one in the north west of England (College 3), so that the results might have more general application. The experiment was carried out in the Autumn Term 1971 at College 2, and in the Spring Term 1972 at College 3. It seemed necessary to work with larger numbers, although it was felt that in an experiment of this nature one should look for replication rather than for size for, as Burroughs (1971) stated:

large numbers are not convincing in themselves. It is far better to replicate the small well designed experiment over many different conditions than to use the same total number ... in a single large scale experiment, inevitably under a single condition. In evaluating an experiment, therefore, one should often look for replication rather than size.

In both colleges it was decided to use all students carrying out their teaching practice in primary schools (including infant or first schools, infant/junior, junior and middle schools). The decision

to restrict the experiment to the primary age-range was made on the grounds that subject specialist teaching in the secondary age range called for a somewhat different approach to assessment, which moved away from the "general practitioner" approach adopted in the primary sector, and that in due course a modified experiment would need to be designed to investigate assessment of practical teaching in the secondary school.

In each college the first assessment was made in the second week of a practice of just under five weeks' duration; the video-taped training session given in the third week, and the final assessment made in the fourth week.

The revised form of the evaluation instrument, where the category concerned with personal relationships was extended to include relationships with non-teaching staff, and the item 'use of lesson note book' provided with additional explanatory notes (see Appendix I) was used for second assessments in the groups "E" (the evaluation instrument group) and "T" (the trained group, using the instrument after receiving video-taped training in its use). The data were recorded to show agreements in assessment grades between heads, tutors and students, and evaluated as in the pilot study, by a trend test (Jonckheere) followed by analysis of variance (Kruskal-Wallis one-way analysis of variance by ranks).

In setting up the experiment, the Academic Board of each college in full consultation with all members of Academic Staff, agreed that tutors would be willing to participate; and through the co-operation of each Student Union student approval was obtained. In College 2 an approach was made to the head-teachers by the teaching practice super-

visor, and the support of all but six heads enlisted. After a visit by the researcher to answer further questions to their satisfaction, the six head-teachers concerned agreed to take part. In College 3 a conference of all the head-teachers was called by the Principal of the College, so that the researcher could explain the demands of the project, and special visits for this purpose were made to the heads unable to attend the meeting. They were all willing to take part. In each College the members of ^{the} whole year group on teaching practice, with the exception of those working in secondary schools were included in the sample, and with last minute adjustments necessitated by sickness and withdrawals for various reasons the necessary groups were established. At College 2, 120 cases (40 in each group "C", "E" and "T") and at College 3, 150 cases (50 in each group) were considered. In the pilot study the trend analysis ($T > C > E$) showed an increase in the number of agreements on grading between students, heads and tutors in the group using the evaluation instrument after training, over the agreements in the control group, but showed a decrease in agreements among those using the instrument without training; and it was felt that this was possibly not representative. It was interesting, therefore, that in both Colleges 2 and 3 a significant trend $T > E > C$ was shown at the 1% level. This indicated that the use of the evaluation instrument brought about a measurable increase in agreement and that where the instrument was used after training a further significant increase in agreement was achieved. (See Tables 7 and 13, and Appendix IV).

At College 2 agreements in the main categories (No. 1 to No. 5 on the instrument) were tabulated as shown in Table 8, and using a Kruskal-Wallis one-way analysis of variance by ranks (see Appendix IV) it was revealed that the increases of agreement on the "T" group returns over those of the "E" group were not significant at the 5% level. This

applied when taking student/head/tutor agreements on their own, and also when student/head, student/tutor and head/tutor agreements were considered together. It may be as Vernon (1953) pointed out, that the number of categories is too small, for he stressed that without listing some ten or more qualities for separate estimation it was unlikely that the rater would spread his assessment over a sufficient range of facets of a student's performance. It should be noted, however, that in the case of tutors and heads there was a high degree of agreement resulting from the use of the instrument without training (group "E"), so that it was unlikely that a further significant increase would result from training in its use (group "T").

Next, agreements in the sub-categories for College 2 were tabulated (See Tables 9, 10, 11 and 12) and Kruskal-Wallis one-way analysis of variance by ranks used again (See Appendix IV). This revealed significant increases in agreement for the "T" group over the "E" group. Taking student/head/tutor agreements on their own, significant increase was registered at the 0.5% level. Student/head agreements were significant at the 1% level, and student/tutor agreements at the 0.1% level. Head/tutor agreements, however, were not significant at the 5% level. Again this reflects the high measure of agreement between heads and tutors prior to the training session explained earlier in this chapter. Taken overall, however, when student/head, student/tutor and head/tutor agreements were combined, the increases of agreements for the "T" group over the "E" group were highly significant. (0.01% level).

For College 3, agreements in the main categories were tabulated as shown in Table 14, and using a Kruskal-Wallis one-way analysis of variance by ranks (See Appendix IV) it was revealed that there were significant increases of agreement on the "T" group returns over those

of the "E" group. Taking student/head/tutor agreements on their own, significant increase was registered at the 5% level, and then taking student/head, student/tutor and head/tutor agreements together there was increased agreement for the "T" group significant at the 1% level.

Next, agreements in the sub-categories for College 3 were tabulated (See Tables 15, 16, 17 and 18) and Kruskal-Wallis one-way analysis of variance by ranks used again (See Appendix IV). This revealed significant increases in agreement for the "T" group over the "E" group throughout. Taking student/head/tutor agreements on their own, significant increase was registered at the 0.1% level. Student/head agreements were significant at the 0.1% level, student/tutor agreements at the 0.1% level, and head/tutor agreements at the 0.5% level. When student/head, student/tutor, head/tutor agreements were combined the increases of agreements for the "T" group over the "E" group were again highly significant. (0.01% level).

SIGNIFICANT INCREASES IN AGREEMENT FOR THE "T" GROUP OVER THE "E" GROUP IN SUB-CATEGORIES 1a - 5c AT COLLEGES 2 AND 3

	STUDENTS/ HEADS/ TUTORS	STUDENTS/ HEADS	STUDENTS/ TUTORS	HEADS/ TUTORS	STUDENTS/HEADS & STUDENTS/TUTORS & HEADS/TUTORS COMBINED
COLLEGE 2	Signif- icant at: 0.5% level	Signif- icant at: 1% level	Signif- icant at: 0.1% level	NOT sig- nificant at: 5% level	Highly sig- nificant (0.01% level)
COLLEGE 3	Signif- icant at: 0.1% level	Signif- icant at: 0.1% level	Signif- icant at: 0.1% level	Signif- icant at: 0.5% level	Highly sig- nificant (0.01% level)

Thus in both Colleges 2 and 3 the effect of training in the use of the evaluation instrument showed a highly significant increase in agreement between students, heads and tutors. The results appear to indicate that discrepancies in the assessment of practical teaching can probably be reduced by the use of a common evaluation instrument, and possibly further reduced when supported by a training session using a video-tape of a classroom situation in conjunction with the evaluation instrument. In each case the data for the evaluation instrument groups ("E") and the trained groups ("T") for Colleges 2 and 3 were entered on to punched cards so that a computer could be used to calculate product-moment correlation coefficients for the two samples, and also carry out a factor analysis of the categories used in the evaluation instrument.

The decision to use parametric statistics was made in the light of two articles by Labovitz (1967 and 1970). Previous analysis by non-parametric methods had shown significance, so that the real value of this additional work lies in the opportunity to use more powerful statistical techniques and deduce the underlying implications. Where it was felt necessary to show that one correlation is significantly higher than another, the procedure recommended by Blalock (1960), pages 309-311, was followed:

If the two correlations are based on independent samples, we can transform each of the r 's into Z 's and then make use of a formula for the standard error of the difference between two Z 's, which is analogous to that for the standard error of a difference between means, and which is as follows:

$$\sigma_{z_1 - z_2} = \sqrt{\frac{1}{N_1 - 3} + \frac{1}{N_2 - 3}}$$

We can then either put a confidence interval about $(Z_1 - Z_2)$ or look up the value of:

$$Z = \frac{(Z_1 - Z_2) - 0}{\sigma_{Z_1 - Z_2}}$$

in the normal table. Zero appears in the above formula because of the fact that our null hypothesis takes the form $p_1 - p_2$.

To convert r into Z score:

$$Z = 1.151 \cdot \log \frac{1+r}{1-r}$$

but in fact standard tables are available for this conversion.

The product-moment correlation coefficients are recorded in Tables 19 and 20 for College 2, and Tables 21 and 22 for College 3 under the heading "Computerised Results" - Phase I in Appendix IV. An inspection of these tables reveals the increased agreement achieved by the training session, between students and heads, students and tutors and tutors and heads. Comparing the coefficients for evaluation group ("E") and trained group ("T") situations in each of these groups for the overall grades on the second assessments, increases were highly significant (See Computerised Results - Phase I, Appendix IV).

A factor analysis was performed on the correlation matrix for sub-categories in College 2, using the system of Computer Programmes developed by H.J. Halworth ("A system of Computer Programmes for use in Psychology and Education", Halworth, H.J., Assisted by Ann Brebner. Education Department, University of Birmingham, 1965 - a British Psychological Society Publication). Principal Components were obtained and the factors rotated to the Varimax (orthogonal) criteria (See Computerised Results - Phase I, Appendix IV).

By comparing the results of the evaluation group ("E") and the trained group ("T") for students, heads and tutors, the percentage of

variance on the first principal component in each "T" group situation is much higher than that in the corresponding "E" group, indicating the increased effectiveness of the evaluation instrument with video-taped training. Moreover, with both students and tutors the number of factors decreases with the trained groups ("T"), indicating that after training the instrument becomes much clearer and more structured than before training.

With heads and tutors in the trained group ("T") two clear factors emerge, one which may be termed "content, organisation and presentation of material", and another "personal qualities and professional behaviour". With students three factors emerged:

- (1) classroom organisation and teacher performance,
- (2) preparation/personal qualities,
- and (3) which indicates a concern for the relationship with colleagues and senior colleagues, and the qualities the student feels these colleagues rate highly (i.e. "discipline, order and management" and "contribution to the general life of the school").

It is interesting to note that if we take a somewhat broader view of the factors relating to heads and tutors, the first factor covers the items 1(a) to 4(c) on the instrument, and the second factor the remaining items(5(a), 5(b) and 5(c)). This suggests that the items on the evaluation instrument do cover what heads and tutors regard as essential criteria.

TABLE 7. (COLLEGE 2.)

TABLE OF OVERALL GRADES - ALL GROUPS (1ST & 2ND ASSESSMENTS)
 SHOWING NUMBER OF AGREEMENTS BETWEEN: (a) STUDENTS, HEADS & TUTORS,
 (b) STUDENTS & HEADS (c) STUDENTS & TUTORS (d) HEADS & TUTORS,

Groups	STUDENT/TUTOR/HEAD AGREEMENT		1ST ASSESSMENT (INTUITIVE)		STUDENT/HEAD AGREEMENT		2ND ASSESSMENT		STUDENT/TUTOR AGREEMENT		1ST ASSESSMENT (INTUITIVE)		STUDENT/TUTOR AGREEMENT		2ND ASSESSMENT		HEAD/TUTOR AGREEMENT		2ND ASSESSMENT		NUMBER OF CASES CONSIDERED		
	16	7	18	15	24	7	27	11	40	17	18	35	16	21	29	16	35	36	21	25	27	39	40
CONTROL "C"	16	7	18	15	24	7	27	11	40														
EVALUATION "E"	17	18	20	21	29	21	25	27	40														
EVALUATION WITH VIDEO-TAPED TRAINING "T"	10	35	16	35	16	35	21	29	16	36	21	25	27	39	40								

TABLE 8. (COLLEGE 2.)

	MAIN CATEGORY AGREEMENTS STUDENTS/HEADS/TUTORS					MAIN CATEGORY AGREEMENTS STUDENTS/HEADS					MAIN CATEGORY AGREEMENTS STUDENTS/TUTORS					MAIN CATEGORY AGREEMENTS HEADS/TUTORS				
	1.	2.	3.	4.	5.	1.	2.	3.	4.	5.	1.	2.	3.	4.	5.	1.	2.	3.	4.	5.
"C"	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
"E"	9	14	17	14	11	15	21	21	19	17	19	25	23	18	15	24	23	28	29	27
"T"	16	24	14	19	13	24	28	19	21	19	24	30	26	28	24	25	30	23	27	23

* MAIN CATEGORIES: 1. PERSONAL RELATIONSHIPS 2. PREPARATION & PLANNING 3. CLASSROOM ORGANISATION
 4. TEACHER PERFORMANCE 5. PERSONAL QUALITIES & PROFESSIONAL BEHAVIOUR

TABLE 9. (COLLEGE 2.)

TABLE SHOWING NUMBER OF AGREEMENTS ON
SUB-CATEGORIES BETWEEN STUDENTS, HEADS & TUTORS

	*	1a	1b	1c	2a	2b	2c	3a	3b	3c	4a	4b	4c	5a	5b	5c	6
"E"		8	10	11	11	13	13	15	10	11	17	9	16	12	9	10	7
"T"		13	17	15	22	20	24	13	17	23	20	20	18	12	8	12	9

SIGNIFICANT DIFFERENCE IN AGREEMENTS AT 0.5% LEVEL

* SUB-CATEGORIES 1a-5c AS SHOWN ON THE REVISED
EVALUATION INSTRUMENT — SEE APPENDIX I

TABLE 10. (COLLEGE 2.)

TABLE SHOWING NUMBER OF AGREEMENTS ON
SUB-CATEGORIES BETWEEN STUDENTS & HEADS.

	*	1a	1b	1c	2a	2b	2c	3a	3b	3c	4a	4b	4c	5a	5b	5c	6
"E"		14	16	19	18	21	18	19	21	20	20	12	26	20	17	19	16
"T"		20	25	22	25	24	30	23	20	27	23	25	26	18	13	19	19

SIGNIFICANT DIFFERENCE IN AGREEMENTS AT 1% LEVEL.

TABLE 11. (COLLEGE 2.)

TABLE SHOWING NUMBER OF AGREEMENTS ON
SUB-CATEGORIES BETWEEN STUDENTS & TUTORS.

	*	1a	1b	1c	2a	2b	2c	3a	3b	3c	4a	4b	4c	5a	5b	5c	6
"E"		17	18	19	20	23	19	22	18	17	25	15	17	18	17	15	20
"T"		22	24	20	30	31	27	24	24	28	28	25	24	20	19	24	14

(SIGNIFICANT DIFFERENCE IN AGREEMENTS AT 0.1% LEVEL)

* SUB-CATEGORIES 1c-5c AS SHOWN ON THE REVISED
EVALUATION INSTRUMENT — SEE APPENDIX I

TABLE 12. (COLLEGE 2.)

TABLE SHOWING NUMBER OF AGREEMENTS ON
SUB-CATEGORIES BETWEEN HEADS & TUTORS

	*	1a	1b	1c	2a	2b	2c	3a	3b	3c	4a	4b	4c	5a	5b	5c	6
"E"		22	25	22	25	19	23	25	20	21	26	24	27	25	20	21	12
"T"		23	23	24	28	26	31	18	28	29	27	24	24	23	22	20	20

(DIFFERENCE IN AGREEMENTS NOT SIGNIFICANT AT 5% LEVEL)

TABLE 13. (COLLEGE 3)

TABLE OF OVERALL GRADES - ALL GROUPS (1ST & 2ND. ASSESSMENTS)
 SHOWING NUMBER OF AGREEMENTS BETWEEN: (a) STUDENTS, HEADS & TUTORS,
 (b) STUDENTS & HEADS (c) STUDENTS & TUTORS (d) HEADS & TUTORS.

GROUPS	STUDENT/TUTOR/HEAD AGREEMENT 1ST. ASSESSMENT (INTUITIVE)	STUDENT/TUTOR/HEAD AGREEMENT 2ND ASSESSMENT.	STUDENT/HEAD AGREEMENT 1ST. ASSESSMENT (INTUITIVE)	STUDENT/HEAD AGREEMENT 2ND. ASSESSMENT.	STUDENT/TUTOR AGREEMENT 1ST. ASSESSMENT (INTUITIVE)	STUDENT/TUTOR AGREEMENT 2ND. ASSESSMENT.	HEAD/TUTOR AGREEMENT 1ST. ASSESSMENT (INTUITIVE)	HEAD/TUTOR AGREEMENT 2ND. ASSESSMENT	NUMBER OF CASES CONSIDERED
CONTROL "C"	26	16	29	23	31	26	39	29	50
EVALUATION "E"	22	39	25	45	29	41	35	41	50
EVALUATION WITH VIDEO-TAPED TRAINING "T"	24	46	29	48	29	46	35	47	50

TABLE 14. (COLLEGE 3.)

	MAIN CATEGORY AGREEMENTS STUDENTS/HEADS/TUTORS					MAIN CATEGORY AGREEMENTS STUDENTS/HEADS					MAIN CATEGORY AGREEMENTS STUDENTS/TUTORS					MAIN CATEGORY AGREEMENTS HEADS/TUTORS				
	*1.	2.	3.	4.	5.	1.	2.	3.	4.	5.	1.	2.	3.	4.	5.	1.	2.	3.	4.	5.
"C"	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
"E"	14	21	23	18	14	28	28	36	32	27	24	28	29	28	22	24	36	29	25	24
"T"	29	28	20	25	24	35	34	32	35	32	35	37	23	28	30	36	34	34	36	35

* MAIN CATEGORIES : 1. PERSONAL RELATIONSHIPS 2. PREPARATION & PLANNING 3. CLASSROOM ORGANISATION
4. TEACHER PERFORMANCE 5. PERSONAL QUALITIES & PROFESSIONAL BEHAVIOUR

TABLE 15. (COLLEGE 3.)

TABLE SHOWING NUMBER OF AGREEMENTS ON
SUB-CATEGORIES BETWEEN STUDENTS, HEADS & TUTORS

	*															
	1a	1b	1c	2a	2b	2c	3a	3b	3c	4a	4b	4c	5a	5b	5c	6
"E"	14	11	12	16	14	18	23	13	17	17	13	13	13	10	19	17
"T"	27	24	21	20	26	29	18	24	19	21	24	23	18	15	23	11

(SIGNIFICANT DIFFERENCE IN AGREEMENTS AT 0.1% LEVEL.)

* SUB-CATEGORIES 1a - 5c AS SHOWN ON THE REVISED
EVALUATION INSTRUMENT — SEE APPENDIX I

TABLE 16. (COLLEGE 3.)

TABLE SHOWING NUMBER OF AGREEMENTS ON
SUB-CATEGORIES BETWEEN STUDENTS & HEADS

	*															
	1a	1b	1c	2a	2b	2c	3a	3b	3c	4a	4b	4c	5a	5b	5c	6
"E"	30	24	24	26	27	25	31	27	29	29	29	28	26	27	29	23
"T"	34	35	31	30	31	36	28	35	32	35	34	35	33	27	33	19

(SIGNIFICANT DIFFERENCE IN AGREEMENTS AT 0.1% LEVEL)

TABLE 17. (COLLEGE 3.)

TABLE SHOWING NUMBER OF AGREEMENTS ON
SUB-CATEGORIES BETWEEN STUDENTS & TUTORS

*	1a	1b	1c	2a	2b	2c	3a	3b	3c	4a	4b	4c	5a	5b	5c	6
"E"	22	24	24	26	20	25	30	23	25	26	21	23	22	19	26	26
"T"	34	29	29	28	32	36	24	27	26	28	33	27	24	24	29	25

(DIFFERENCE IN AGREEMENTS SIGNIFICANT AT 0.1% LEVEL)

* SUB-CATEGORIES 1a-5c AS SHOWN ON THE REVISED
EVALUATION INSTRUMENT — SEE APPENDIX I

TABLE 18. (COLLEGE 3.)

TABLE SHOWING NUMBER OF AGREEMENTS ON
SUB-CATEGORIES BETWEEN HEADS & TUTORS

*	1a	1b	1c	2a	2b	2c	3a	3b	3c	4a	4b	4c	5a	5b	5c	6
"E"	21	19	21	28	28	31	30	25	23	25	20	21	24	17	29	27
"T"	35	31	30	31	37	34	31	35	27	28	28	31	24	25	32	22

(DIFFERENCE IN AGREEMENTS SIGNIFICANT AT 0.5% LEVEL)

PHASE II

The decision to draw upon teacher training institutions across the country where students, experienced class teachers (or heads) and tutors engaged upon penultimate or final teaching practice work, used the instrument for assessment purposes and then weighted the fifteen sub-categories using a five point scale (without +'s and -'s), was facilitated by fortuitous circumstance.

An invitation to contribute to two seminars on the assessment of practical teaching, for the Society for Research into Higher Education (SRHE) in October 1974 and June 1975, led to the publication of the instrument, and subsequent opportunities to visit colleges wishing to hear of and use the instrument. The only stipulations made for participants in Phase II of the experiment were, that the instrument should be used by all parties concerned in the assessment process (i.e. students, teachers and tutors) and that the practice should be in either infant or first schools, infant/junior, junior or middle schools. The letter sent to students, teachers and tutors is shown in Appendix II, and the weighting instructions and necessary form for completion at the end of Appendix I. A "link-man" from the academic staff of each institution was established to deal with the administration of the experiment, and to be responsible for the collection of returns from teachers, tutors and students.

The object of this aspect of the investigation was not to arrive at a "once and for all" list of criteria of teacher effectiveness, which could be regarded for ever more as essential in all those claiming to be effective teachers; but rather as a step towards increased understanding of those factors considered important by teachers in training (students),

teachers of teachers in training (tutors) and serving teachers in the schools, for competence in the classroom and school situation. Such a step could lead to greater efficiency in the process of planning, implementing and evaluating professional studies courses in programmes of initial teacher training.

Three hundred and sixty returns were received and tabulated by the end of October 1978 (from 120 students, 120 teachers and 120 tutors), and entered on to punched cards. The rank orders of the importance attached to the fifteen sub-categories (i.e. criteria) were calculated by taking the group mean for each category for the three groups, and then tabulated (Table 23) to show the relationship between these orders. The table shows that all three groups ranked 1(a), "Personal Relationships with Pupils" as the most important, and 2(c), "Use of Lesson Note Book" as least important. However, 5(c), "Contribution to general life of the school" was ranked 12th by students, 7th by teachers and 11th by tutors. The relationship between the three rankings was then obtained by calculating the Spearman's rho rank correlation coefficient. The correlations all proved to be quite high, indicating that the three groups tended to show reasonable agreement about the relative importance of the fifteen criteria. The correlation between students and tutors proved to be the highest (+ .97), indicating that their rankings were close, while that between students and teachers was the lowest (+ .82). This corresponds to the results of the factor analysis where student and tutor groups appear closer to each other than do either the student group or the tutor group to the teacher group.

FACTOR ANALYSIS

Factor analysis is a technique for empirical data reduction. When confronted with scores on a large number of variables such as those on

TABLE 23.

RANK ORDER OF RATINGS OF SUB-CATEGORIES (CRITERIA).			
SUB-CATEGORIES (CRITERIA)	STUDENTS	TEACHERS	TUTORS
* 1a.	1 ST .	1 ST .	1 ST
1b.	14 TH .	14 TH .	12 TH .
1c.	9 TH .	9 TH .	10 TH .
2a.	5 TH	3 RD .	4 TH .
2b.	4 TH .	10 TH .	5 TH .
2c.	15 TH .	15 TH	15 TH .
3a.	6 TH .	5 TH .	7 TH .
3b.	11 TH .	13 TH .	13 TH .
3c.	2 ND .	2 ND .	2 ND .
4a.	7 TH	8 TH .	6 TH .
4b.	3 RD .	4 TH .	3 RD .
4c.	8 TH	11 TH .	8 TH .
5a.	13 TH .	12 TH .	14 TH .
5b.	10 TH .	6 TH .	9 TH .
5c.	12 TH .	7 TH .	11 TH .

RANK ORDER CORRELATION COEFFICIENTS (SPEARMAN'S RHO) BETWEEN THE THREE GROUPS	
STUDENTS & TEACHERS	+0.82
STUDENTS & TUTORS	+0.97
TEACHERS & TUTORS.	+0.86

* SUB-CATEGORIES 1a-5c AS SHOWN ON
THE REVISED INSTRUMENT - SEE APPENDIX I.

the evaluation instrument, it is often desirable to summarise them in some way. If there is reason to believe that the variables relate to each other we will probably be interested not only in looking at them one at a time or studying individual correlations between them, but also in looking at overall patterns within the data. One way of doing this is to say on a priori or theoretical grounds that certain variables belong together or are measuring the same thing. However, we are often not in a position to do this and empirical techniques such as factor analysis allow us to look for patterns in the data in an exploratory fashion. This does not mean that factor analysis is a purely inductive technique. The choice of variables and the factoring method employed involve assumptions about the data and about patterns of variation in them, but these assumptions can be of a relatively general nature.

Factor analysis starts with a series of inter-relationships between variables expressed in a correlation matrix. The analysis looks for patterns in these inter-correlations and attempts to find a smaller number of factors or components which account for the observed correlations.

Extracting the initial factors

The first procedure is to extract the initial factors. Here a decision has to be made about the data model being assumed. In a PRINCIPAL COMPONENTS ANALYSIS (such as that used in Phase I of the experiment, and for the Pilot Study for Phase II - see Appendix IVC) no assumptions about underlying patterns are made and the factors are simple transformations of the original matrix, the first factor being the single best linear summary of the data, the second factor being the best linear summary once the variance due to the first factor has been removed, and so on. In a CLASSICAL FACTOR ANALYSIS (as used for Phase II

of the Main Study - See Appendix IVC) the observed correlations are assumed to depend on real underlying dimensions. Each variable is assumed to have a UNIQUE element of its own and a COMMON element which it shares with other variables and to which the correlations are due. Under this assumption, before the initial factors are extracted from the matrix the diagonal matrix entries are replaced by estimates of the communalities.

Under both procedures the analysis will normally result in as many factors as there were original variables. Each factor will have a loading for each variable, each will have an associated eigen-value and each will account for a certain percentage of the variation in the original matrix. By definition the factors will account for decreasing proportions of the original variation and often the first few factors will account for most of the variation and later factors for very small amounts (in the case of a set of variables which are all measuring the same thing, for example, a simple attitude scale, we may find that the first factor accounts for nearly all the variation).

As the purpose of the analysis is data reduction, we are unlikely to be interested in as many factors as original variables and a decision has to be taken about how many factors we are interested in for further analysis. Some cut off point has to be taken as the factors become progressively less important. A commonly adopted one is only to consider factors with eigen-values equal to or greater than one.

Rotation of factors

The initial factors rarely give easily interpretable results. The first factor is a good indication of whether there is a single dimension underlying all the variables, as, for example, in an

attitude scale. But subsequent variables are influenced by the fact that the first factor and then any factor extracted before them, reduce the amount of variance available. It is normal therefore to rotate those factors chosen for further analysis in order to get interpretable results. There are a number of rotation procedures available, the most basic distinction between them being whether they are ORTHOGONAL or OBLIQUE. Orthogonal rotations keep the various factors uncorrelated with one another, while oblique methods allow inter-factor correlations (the matrix of these inter-correlations can be input into a further 'second-order' factor analysis). The most commonly used rotation method is an orthogonal procedure called VARIMAX rotation.

The output from a rotation is a matrix of the loadings of each variable on each factor. Loadings can vary from +1 through 0 to -1. The factors are defined by the variables which load most highly on them. There are no hard and fast rules for deciding what constitutes a high loading, but a frequently used rule of thumb is to consider all loadings greater than +.3 or -.3 (positive and negative loadings have no absolute meaning but variables which load with different signs on the same factor are related to it in opposite directions). For this study, the author has generally considered loadings greater than +.5 or -.5, in interpreting the data.

The present analysis for Phase II was conducted using the SPSS (Statistical Package for the Social Sciences) system of computer programmes. Initial factors were extracted using the assumptions of classical factor analysis and all factors with eigen-values greater than or equal to one were input to the rotation procedure. Rotation was performed according to the Varimax criteria and a matrix of

factor loadings was obtained.

The data were processed in the following ways, and product-moment correlation coefficient matrices drawn up and factor analysis results recorded for each grouping:

- (a) students' and teachers' and tutors' returns
all together,
- (b) students' returns only,
- (c) teachers' returns only,
- (d) tutors' returns only,
- (e) students' and teachers' returns together,
- (f) students' and tutors' returns together,
- (g) teachers' and tutors' returns together.

(see Appendix IV (c) (iii) Computerised results
Phase II Main Study)

From the overall student/teacher/tutor group analysis, certain factors clearly emerge:

1. A 'personality' factor (as in the Pilot Study) which stressed the importance of:
 - (a) personal relationships with colleagues and senior colleagues,
 - and (b) personal qualities and professional behaviour.
2. A factor which emphasised the value of personal relationships with pupils (relationship with class and individual children - 'contact' with pupils).
3. A preparation and planning factor concerned with the planning and preparation of teaching resources in general.
4. A factor drawing attention to the vital skills of organisation and teacher performance in the classroom situation.
- and 5. A discipline factor expressing concern for discipline, order and management in the classroom, creating and sustaining interest, stimulating and handling pupils' responses.

Furthermore, by studying the factors which emerge from analysis of the data for other groupings, minor differences from a general overall agreement become apparent. Such differences may well be taken into account in planning a professional studies course both school and college based. For school based work the teachers' interpretation may be given priority, whereas in college on occasions the tutors' views may be considered the important ones, and on others those of the students.

Factor 1. ('personality ') emerged from the analysis of data from all groupings, but whereas the students were concerned with the importance of relationships with both colleagues and senior colleagues, the tutors stressed the importance of relationships with senior colleagues (head, deputy, class-teacher of student's class, tutor: attitude to criticism and advice), the teachers gave priority to relationships with colleagues (fellow students, other class-teachers and non-teaching staff in the same school) and also linked the teacher performance quality of 'flexibility' (ability to modify plans to meet the demands of the situation) to the factor.

Factor 2. (personal relationships with pupils) was revealed by analysis in all groupings except that of the teachers. Tutors related it specifically to 'contribution to the general life of the school', students to 'flexibility' and 'questioning', teachers/tutors to 'organisation, distribution and use of materials and apparatus', and teachers/students to 'flexibility'.

Factor 3. (preparation and planning) was shown by the analysis of data from all groupings. Teachers emphasised the importance of the link with 'suitability of content (students' knowledge and expertise)', students and students/teachers together emphasised the

relationship with 'organisation, distribution and use of material and apparatus'.

Factor 4. (organisation and teacher performance) in the student/teacher/tutor group was firmly related to 'preparation and planning'. Tutors indicated the related importance of 'suitability of content', while teachers and students/teachers together clearly indicated 'teacher performance' and 'classroom organisation' as separate factors, the students specifically linking teacher performance with personal relationships with pupils.

Factor 5.(discipline) was revealed by analysis for all groupings except

- (a) teachers
- (b) tutors
- and (c) tutors and teachers together;

the student group analysis showed a firm connection with 'suitability of content', 'presentation of material' and 'voice and delivery, quality of speech'. (See also pages 103a - 103m)

This interpretation of the data is helpful to the author of the study, but it is felt that the value of the experiment lies in the tabulation of the results in the correlation coefficient matrices and in the recorded loadings on the factor analyses, which are available for the guidance of those designing, implementing and evaluating courses of professional studies in initial teacher education. Ideally it is for such people to make their own interpretation of the findings of this experiment.

Ned Flanders (1976) from the Far West Laboratory for Educational Research and Development in California, writing an article on "Research on teaching and improving teacher education" in the British Journal

of Teacher Education explains that those who conduct research on teaching believe that ultimately their research will contribute to the public good through the improvement of education. Expressing this opinion in the form of a fairy tale:

"Once upon a time a persistent educational researcher worked very hard for long hours and discovered many differences between effective teachers who were good and the ineffective teachers who were bad. As he discovered each difference, he ran to the professors of education and told them all about it with great excitement. The professors, of course, were overjoyed and not only included the new knowledge in their curricula for beginning teachers, but incorporated it into their own teaching methods. As a result, better teachers taught boys and girls to become better citizens and everyone lived happily ever after".

.....Flanders goes on to emphasise the glaring discrepancies between the fairy tale and the real world of education, and to draw attention to the difficult task of showing how the fairy tale may become true by making changes in both teacher education and also in the manner in which we conduct research on teaching. In developing the theme of his article Flanders lists the questions which demand attention, including:

- (a) what teacher skills are needed?
- (b) how can adults learn these skills?
- (c) how are these skills used in longer instructional strategies?
- (d) how can these strategies be learned?

He then goes on to say that our answers to such questions are likely

to remain incomplete, and that it is quite likely that for the next few decades we will be required to teach teachers how to evaluate their own teaching, so that they can decide for themselves which skills and strategies are most useful to them.

"This suggests that learning how to study one's own teaching may well be the most important single objective in teacher education".

With Flanders' article in mind, it is hoped that this present investigation into the criteria of teacher effectiveness related to a study of the assessment of practical teaching, may make some small contribution to help those who seek to improve teacher education.

FURTHER CONSIDERATION AND DISCUSSION OF THE DATA
FROM FACTOR ANALYSIS :

From the decision (p 98) to consider factor loadings greater than +.5 or -.5 in interpreting the data the five factors emerged as follows:-

FACTOR 1

A 'personality' factor which stressed the importance of:

- (a) personal relationships with colleagues and senior colleagues
and (b) personal qualities and professional behaviour.

STUDENTS & TEACHERS & TUTORS TOGETHER: (% of variance: 49.2)

Personal relationships with colleagues (factor loading .69)

Personal relationships with senior colleagues (.60)

Personal qualities and professional behaviour:

Appearance, bearing, dress (.72)

Voice and delivery, quality of speech (.51)

STUDENTS: (% of variance: 47.8)

Personal relationships with colleagues (factor loading .69)

Personal relationships with senior colleagues (.75)

Personal qualities and professional behaviour:

Appearance, bearing and dress (.72)

TEACHERS: (% of variance: 42.7)

Personal relationships with colleagues (factor loading .75)

Personal qualities and professional behaviour:

Appearance, bearing and dress (.73)

Contribution to general life of the school (.50)

TUTORS: (% of variance: 22.4)

Personal relationships with senior colleagues (factor loading .91)

Personal qualities and professional behaviour:

Appearance, bearing and dress (.56)

STUDENTS & TEACHERS TOGETHER: (% of variance 48.5)

Personal relationships with colleagues (factor loading .72)

Personal qualities and professional behaviour:

Appearance, bearing and dress (.82)

STUDENTS & TUTORS TOGETHER: (% of variance: 47.8)

Personal relationships with colleagues (factor loading .67)

Personal relationships with senior colleagues (.71)

Personal qualities and professional behaviour:

Appearance, bearing and dress (.64)

TEACHERS & TUTORS TOGETHER: (% of variance: 42.6)

Personal relationships with colleagues (factor loading .71)

Personal relationships with senior colleagues (.68)

Personal qualities and professional behaviour:

Appearance, bearing and dress (.60)

FACTOR 2

A factor which emphasised the value of personal relationships with pupils (relationship with class and individual children - 'contact' with pupils).

STUDENTS & TEACHERS & TUTORS TOGETHER: (% of variance: 10.5)

Personal relationships with pupils (factor loading .61)

STUDENTS: (% of variance: 10.1)

Personal relationships with pupils (factor loading .58)

Teacher performance: Flexibility (.56)

Teacher performance: Questioning (.60)

TUTORS: (% of variance: 17.3)

Personal relationships with pupils (factor loading .76)

Personal qualities and professional behaviour:

Contribution to general life of the school (.61)

STUDENTS & TUTORS TOGETHER: (% of variance: 7.8)

Personal relationships with pupils (factor loading .63)

FACTOR 3

A preparation and planning factor concerned with the planning and preparation of teaching resources in general.

STUDENTS & TEACHERS & TUTORS TOGETHER (% of variance: 10.0)

Preparation and planning of teaching resources
in general (factor loading .62)

STUDENTS (% of variance: 13.8)

Preparation and planning of teaching resources
in general (factor loading .77)

Classroom organisation: organisation, distribution
and use of material and apparatus (.58)

TEACHERS (% of variance 11.0)

Preparation and Planning: suitability of 'content'
(factor loading .72)

TUTORS (% of variance 7.3)

Preparation and planning of teaching resources in
general (factor loading .77)

STUDENTS & TEACHERS TOGETHER (% of variance 11.9)

Preparation and planning: use of lesson note book
(factor loading .55)

Classroom organisation: distribution and use of
material and apparatus (.61)

STUDENTS & TUTORS TOGETHER (% of variance 14.5)

Preparation and planning of teaching resources in
general (factor loading .80)

TEACHERS & TUTORS TOGETHER (% of variance 7.6)

Preparation and planning of teaching resources in
general (factor loading .57)

FACTOR 4

A factor drawing attention to the vital skills of organisation
and teacher performance in the classroom situation.

STUDENTS & TEACHERS & TUTORS TOGETHER (% of variance: 22.1)

Preparation and planning: suitability of 'content'
(factor loading .50)

Classroom organisation: use of A/V aids (.59)

Teacher performance: presentation of material (.61)

Teacher performance: questioning (.52)

STUDENTS (% of variance: 6.9)

Classroom organisation: use of A/V aids (factor loading .58)

TEACHERS (% of variance: 17.0)

Classroom organisation: distribution and use of material
and apparatus (factor loading .94)

Classroom organisation: use of A/V aids (.51)

TEACHERS (% of variance: 6.7)

Teacher performance: presentation of material (factor
loading .94)

Teacher performance: questioning (.66)

TUTORS (% of variance: 42.0)

Classroom organisation: use of A/V aids (factor loading .90)

Personal qualities and professional behaviour:
appearance, bearing and dress (.50)

TUTORS (% of variance 11.0)

Teacher performance: presentation of material (factor
loading .62)

Preparation and planning: presentation of material (.74)

STUDENTS & TEACHERS TOGETHER (% of variance: 21.4)

Teacher performance: questioning (factor loading .66)

STUDENTS & TEACHERS TOGETHER (% of variance: 9.6)

Teacher performance: flexibility (factor loading .51)

STUDENTS & TUTORS TOGETHER (% of variance: 18.6)

Classroom organisation: use of A/V aids (factor loading .50)

Teacher performance: questioning (.50)

Preparation and planning: suitability of 'content' (.63)

TEACHERS & TUTORS TOGETHER (% of variance 22.0)

Classroom organisation: use of A/V aids (factor loading .53)

Teacher performance: presentation of material (.67)

Teacher performance: questioning (.53)

TEACHERS & TUTORS TOGETHER (% of variance: 11.5)

Classroom organisation: distribution and use of
material and apparatus (factor loading .65)

TEACHERS & TUTORS TOGETHER (% of variance 6.7)

Teacher performance: Flexibility (factor loading .61)

FACTOR 5

A discipline factor expressing concern for discipline, order and management in the classroom, creating and sustaining interest, stimulating and handling pupils' responses.

STUDENTS & TEACHERS & TUTORS TOGETHER (% of variance: 8.2)

Classroom organisation: discipline, order and
management (factor loading .50)

STUDENTS (% of variance: 21.4)

Preparation and planning: suitability of 'content'
(factor loading .56)

Classroom organisation: discipline, order and
management (.58)

Teacher performance: presentation of material (.52)

Personal qualities and professional behaviour: voice
and delivery, quality of speech (.69)

STUDENTS & TEACHERS TOGETHER (% of variance 11.3)

Classroom organisation: discipline, order and
management (factor loading .69)

The frequently used rule of thumb to consider all loadings greater than +.3 or -.3, when applied, reveals the information shown on the following charts, which enable a comparison to be made between the Varimax loadings for the different groups:

FACTOR 1. A 'PERSONALITY' FACTOR STRESSING THE IMPORTANCE OF: (a) PERSONAL RELATIONSHIPS WITH COLLEAGUES & SENIOR COLLEAGUES (b) PERSONAL QUALITIES AND PROFESSIONAL BEHAVIOUR.	FACTOR LOADING FOR :						
	STUDENTS & TEACHERS & TUTORS TOGETHER	STUDENTS	TEACHERS	TUTORS	STUDENTS & TEACHERS TOGETHER	STUDENTS & TUTORS TOGETHER	TEACHERS & TUTORS TOGETHER
PERSONAL RELATIONSHIPS WITH COLLEAGUES	.69	.69	.75	.47	.72	.67	.71
PERSONAL RELATIONSHIPS WITH SENIOR COLLEAGUES	.60	.75	—	.91	.49	.71	.68
PERSONAL QUALITIES & PROFESSIONAL BEHAVIOUR :							
(a) APPEARANCE, BEARING & DRESS	.72	.72	.73	.56	.82	.64	.60
(b) VOICE & DELIVERY, QUALITY OF SPEECH.	.51	—	.41	.37	.41	.37	.44
(c) CONTRIBUTION TO GENERAL LIFE OF THE SCHOOL.	.43	.44	.50	—	.48	.33	.40

<p>FACTOR 2.</p> <p>A FACTOR EMPHASISING PERSONAL RELATIONSHIPS WITH PUPILS (RELATIONSHIP WITH THE CLASS & INDIVIDUAL CHILDREN — 'CONTACT' WITH PUPILS.)</p>	FACTOR LOADINGS FOR :						
	STUDENTS & TEACHERS & TUTORS TOGETHER.	STUDENTS	TEACHERS	TUTORS	STUDENTS & TEACHERS TOGETHER	STUDENTS & TUTORS TOGETHER	TEACHERS & TUTORS TOGETHER.
PERSONAL RELATIONSHIPS WITH PUPILS	.61	.58	—	.76	—	.63	—
PERSONAL RELATIONSHIPS WITH SENIOR COLLEAGUES	—	.43	—	—	—	—	—
PREPARATION & PLANNING OF TEACHING RESOURCES IN GENERAL	—	—	—	.30	—	—	—
CLASSROOM ORGANISATION; DISTRIBUTION & USE OF MATERIALS & APPARATUS	.43	—	—	.32	—	—	—
TEACHER PERFORMANCE; FLEXIBILITY	.31	.56	—	—	—	—	—
TEACHER PERFORMANCE; QUESTIONING,	—	.60	—	—	—	—	—
VOICE & DELIVERY, QUALITY OF SPEECH	—	—	—	.44	—	—	—
CONTRIBUTION TO GENERAL LIFE OF THE SCHOOL.	—	—	—	.61	—	.44	—

<p><u>FACTOR 3.</u></p> <p>A PREPARATION & PLANNING FACTOR, CONCERNED WITH THE PLANNING & PREPARATION OF TEACHING RESOURCES IN GENERAL.</p>	FACTOR LOADINGS FOR :						
	STUDENTS & TEACHERS & TUTORS TOGETHER.	STUDENTS	TEACHERS	TUTORS	STUDENTS & TEACHERS TOGETHER	STUDENTS & TUTORS TOGETHER	TEACHERS & TUTORS TOGETHER
PREPARATION & PLANNING OF TEACHING RESOURCES IN GENERAL	•62	•77	•32	•77	•40	•80	•57
SUITABILITY OF 'CONTENT'	—	—	•72	—	•38	—	—
USE OF LESSON NOTE BOOK	—	•48	—	—	•55	—	—
ORGANISATION, DISTRIBUTION AND USE OF MATERIAL & APPARATUS	•34	•58	—	—	•61	—	—
USE OF A/V AIDS	—	—	—	—	•46	—	—
DISCIPLINE, ORDER & MANAGEMENT	—	—	•35	—	—	—	—
TEACHER PERFORMANCE : PRESENTATION OF MATERIAL	—	—	—	—	•39	—	—
APPEARANCE, BEARING & DRESS	—	—	—	—	—	•41	—
VOICE & DELIVERY : QUALITY OF SPEECH	—	•31	—	—	—	•42	—

FACTOR 4. A FACTOR DRAWING ATTENTION TO THE VITAL SKILLS OF ORGANISATION & TEACHER PERFORMANCE IN THE CLASSROOM SITUATION.	FACTOR LOADINGS FOR :										
	STUDENTS & TEACHERS & TUTORS TOGETHER	STUDENTS	TEACHERS		TUTORS		STUDENTS & TEACHERS TOGETHER	STUDENTS & TUTORS TOGETHER	TEACHERS & TUTORS TOGETHER		
ORGANISATION, DISTRIBUTION & USE OF MATERIAL & APPARATUS	—	—	.94	—	—	—	—	.40	.39	—	—
USE OF A/V AIDS	.59	.58	.51	.40	.90	—	.48	—	.50	.53	—
TEACHER PERFORMANCE: PRESENTATION OF MATERIAL	.61	—	—	.94	—	.62	.46	—	.48	.67	—
FLEXIBILITY	—	—	.40	—	—	—	.48	.51	—	—	.61
QUESTIONING	.52	.37	—	.66	.37	.31	.66	—	.50	.53	—
PREPARATION & PLANNING OF TEACHING RESOURCES IN GENERAL	—	—	—	—	.34	—	—	—	—	—	—
SUITABILITY OF 'CONTENT'	.50	—	.38	—	—	.74	—	—	.63	.48	—
USE OF LESSON NOTE BOOK	.45	.44	—	.30	.45	—	—	—	.37	.39	—
PERSONAL RELATIONSHIPS WITH COLLEAGUES	—	.30	—	—	—	—	—	—	—	—	—
PERSONAL RELATIONSHIPS WITH SENIOR COLLEAGUES	—	—	—	—	—	—	.44	—	—	—	—
APPEARANCE, BEARING & DRESS	—	—	—	—	.50	—	—	—	—	—	—
VOICE & DELIVERY, QUALITY OF SPEECH	—	—	—	—	.36	—	—	—	—	—	—

FACTOR 5.	FACTOR LOADINGS FOR :						
	STUDENTS & TEACHERS & TUTORS TOGETHER.	STUDENTS	TEACHERS	TUTORS	STUDENTS & TEACHERS TOGETHER	STUDENTS & TUTORS TOGETHER	TEACHERS & TUTORS TOGETHER
A 'DISCIPLINE' FACTOR : EXPRESSING CONCERN FOR DISCIPLINE, ORDER & MANAGEMENT IN THE CLASSROOM, CREATING AND SUSTAINING INTEREST, STIMULATING & HANDLING PUPILS' RESPONSES							
DISCIPLINE, ORDER & MANAGEMENT	.50	.58	.35	—	.55	.69	—
PERSONAL RELATIONSHIPS WITH PUPILS.	—	.30	—	—	—	—	—
PREPARATION & PLANNING SUITABILITY OF 'CONTENT'	—	.56	.72	—	—	—	—
TEACHER PERFORMANCE PRESENTATION OF MATERIAL	—	.52	—	—	.42	—	—
VOICE & DELIVERY QUALITY OF SPEECH.	.45	.69	—	—	—	.46	—
PREPARATION & PLANNING OF TEACHING RESOURCES IN GENERAL.	—	—	.32	—	—	—	—

TWO ADDITIONAL FACTORS which emerged were:

(i) TEACHERS (% of variance: 12.6)

Personal relationships with senior colleagues
(factor loading .66)

Teacher Performance: flexibility (.57)

and (ii) TEACHERS & TUTORS TOGETHER (% of variance: 9.6)

Personal qualities and professional behaviour:

Voice and delivery, quality of speech (factor
loading .56)

Appearance, bearing and dress (.37)

Classroom organisation: use of A/V aids (.38)

By studying the charts on the previous pages, considering all Varimax loadings greater than +.3 or -.3, FACTOR 1 still emerges with overall agreement between all groups concerned. It is interesting to note that students did not relate 'voice and delivery, quality of speech' to this factor; that teachers did not consider 'personal relationships with senior colleagues' worthy of high rating in this context; and for their part tutors did not associate 'contribution to the general life of the school' with this factor, despite general agreement between all other groups. The tutors also stressed the importance of 'personal relationships with senior colleagues' with a loading (.91) much higher than all other groups; and considered 'personal relationships with colleagues' of less importance (Varimax loading .47) than the other groups.

The Varimax loadings for FACTOR 2, emphasising personal relationships with pupils still revealed no concern for this item by the teacher group. The tutors with the highest rating (.76) associated the factor with 'preparation and planning of teaching resources in general', 'distribution and use of material and apparatus', 'voice and delivery, quality of speech' and 'contribution to the general life of the school'. The students stressed the links with 'flexibility', 'questioning', and to a lesser extent with 'personal relationships with senior colleagues'.

The charts for FACTORS 3 and 4 show an overall concern for planning and preparation of teaching resources in general, and the vital skills of organisation and teacher performance in the classroom situation.

For FACTOR 3 (preparation and planning), the teachers stressed the importance of 'suitability of content', and linked this with the need for 'discipline, order and management'. The students for their part, associated the 'use of lesson note book' and 'the organisation, distribution and use of material and apparatus' with preparation and

planning. Concerning FACTOR 4 (organisation and teacher performance) the factor analysis showed for both teachers and tutors two clear factors for each group under this heading, recorded in separate columns on the chart. Items which stand out clearly for all groups (students, teachers and tutors) are

- (a) use of A/V aids
- and (b) questioning.

FACTOR 5 (Discipline, order and management) once more emerged quite clearly for all groups except the tutors. The teachers associated this factor with 'suitability of content' and 'preparation and planning of teaching resources in general'. Moreover, it is interesting to note the associated items linked to the factor by the students:

- (a) voice and delivery, quality of speech
- (b) suitability of content
- (c) presentation of material
- and (d) personal relationships with pupils.

THE VALIDITY AND RELIABILITY OF THE PRESENT STUDY :

The Author was naturally concerned with validity (the degree to which the evaluation instrument actually served the purposes for which it had been designed), and reliability (the extent to which the instrument was consistent in measuring what it was intended to measure).

The fact that the nature of the investigation was such that no specific teaching situation could be repeated in order to test validity and reliability, was compensated for, to a certain extent, by the design of the experiment, whereby more than one assessor was employed for each situation, and that data were collected from a variety of institutions across the country. Nevertheless the researcher was aware of a limitation here, where on reflection the possibility of having more than one teacher-assessor, and more than one tutor-assessor present for each of a limited number of teaching situations in different parts of the country; and follow up repeat situations involving the same people (pupils, student being assessed, and teachers and tutors as assessors) could have been carried out after a period of time had elapsed.

With regard to content validity (i.e. how well the content of the instrument sampled the teaching practice situation), and construct validity (concerning the psychological qualities of the instrument), this was catered for to a certain extent, by the weighting of the original instrument in the pilot study, when the respondents were asked to suggest additional criteria for inclusion in the instrument, and critical comment on the instrument was also invited. Concerning predictive validity, no attempt was made to collect assessment data at a later date on the students involved in the experiment; but the nature of the investigation where assessment gradings arrived at using

the instrument were compared with the contemporary measure of global assessments arrived at intuitively, provided some measure of concurrent validity.

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CHAPTER 5

SUMMARY AND CONCLUSIONS

Before considering the conclusions to be drawn from the findings of this investigation, it seemed desirable to place in context the whole of the work carried out, in a brief summary:

The experiment was designed to investigate the assessment of practical teaching, and then by developing the link between professional studies courses (in initial teacher education) and practical experience (i.e. teaching practice) to seek increased knowledge in the field of criteria of teacher effectiveness.

The first phase of the experiment was planned to investigate the hypothesis that:

Differences in the assessment of practical teaching between head-teachers, tutors and students are reduced by the use of a common evaluation instrument supported by a training session using a video-tape of a classroom situation.

The evaluation instrument was designed by making a study of existing work in this field to discover areas of agreement, and then drawing upon the evidence collected by Stones and Morris (1970).

The resulting instrument offered three items to be considered under each of the five main headings:

1. Personal Relationships
2. Preparation and Planning
3. Classroom Organisation
4. Teacher Performance
5. Personal Qualities and Professional Behaviour

A video-tape of a simulated classroom situation, for common viewing, was then produced to be used for practice in the use of the instrument before all parties concerned used it in the actual

classroom situation. For the video-tape to serve its purpose in giving assessors experience in using the evaluation instrument, a situation was devised which would produce a state of alertness in the observers because of inconsistent teaching, and constantly contradictory factors of good, bad and moderate teaching ability.

The investigation called for the co-operation of supervising tutors, head-teachers (or experienced teachers appointed for the experiment to deputise for the head), and students on teaching practice. Each case considered comprised a student, a tutor and a head-teacher.

The Pilot Study was carried out at a college in the south-east of England, College 1 (48 cases), and later replicated in the Midlands, College 2 (120 cases) and in the north-west of England, College 3 (150 cases).

By random selection each sample was divided into three parts:

'C', a control group,
'E', an evaluation instrument group,
and 'T', an evaluation instrument group, each member
receiving video-tape training in the use of
the instrument.

All students assessed themselves as well as being assessed by their tutors and the head-teachers of the schools in which they practised.

Early in each practice at an agreed time during the second week, all groups carried out an assessment on a subjective, intuitive basis, giving an overall grade of teaching ability on a five-point scale.

Two weeks or more later at an agreed time in the practice, the

control groups made a re-assessment giving once more an overall grade on an intuitive basis. The evaluation instrument group ('E') made a re-assessment using the instrument, and the trained group ('T') made a re-assessment using the same evaluation instrument, having had a short training session in its use, involving the simulated video-taped teaching situation. The training session took place between the first and second assessments.

The training session involved the viewing of the video-tape, when heads, tutors and students independently assessed the teacher portrayed in the simulation on an intuitive basis (using a five-point scale). Having been presented with the evaluation instrument, they viewed the video-taped teaching situation again and completed the instrument. As certain items on the instrument could not be completed by information obtained solely from viewing the tape, participants were supplied with further simulated material to enable them to carry out the task. Members of the trained group ('T') were then supplied with further copies of the evaluation instrument for use in the classroom situation on the second assessment.

An overall grade was calculated for the evaluation instrument group ('E') and the trained group ('T') on the second assessment. First and second assessments by heads, tutors and students were tabulated to show the number of agreements and, by inspection, any increase in agreements between the two assessments.

The Jonckheere Trend Test indicated no trend on the intuitive assessment, and a significant trend $T > E > C$ on the second assessment for colleges 2 and 3, showing that when the evaluation instrument was used for assessments by head-teachers and tutors and for self-assessments

by students, there was increased agreement on the grades given between all the parties concerned, and a further increase in agreement when the instrument was used after training in its use. This confirmed the view that the trend in the Pilot Study $T > C > E$ was possibly not representative. Significant increases of agreement on the 'T' group returns over those of the 'E' group on main and sub-categories were revealed by use of a Kruskal-Wallis one-way analysis of variance by ranks.

Furthermore, in order to examine the data for inter-relationships among the main and sub-categories of the instrument, a computer was used to calculate the product-moment correlation coefficients on main and sub-categories for Colleges 2 and 3, and a factor analysis of the fifteen sub-categories (1a to 5c) at College 2 was performed.

The results of this experiment suggest that by using the evaluation instrument for the assessment of practical teaching, increased agreement (between head-teachers, tutors and students) is likely to be achieved compared with a situation where only intuitive global assessments are made. A further increase in agreement will probably be achieved, however, when the use of the instrument is augmented by a training session in its use involving a video-taped teaching simulation.

Using non-parametric techniques the degree of increased agreement was shown to be significant. These results were supplemented by the use of product-moment correlation coefficients, and again the increases by the trained group on the overall grades were shown to be highly significant.

It was concluded, therefore, that the original hypothesis was supported, i.e. that

Differences in the assessment of practical teaching between head-teachers, tutors and students are reduced by the use of a common evaluation instrument, supported by a training session using a video-tape of a classroom situation.

The second phase of the experiment was concerned with a refinement of knowledge in the field of criteria of teacher effectiveness, working towards a set of such criteria to be used in the design, implementation and evaluation of professional studies courses in initial teacher education programmes.

In the light of the findings in Phase I, there was a general indication that the Ellis Evaluation Instrument contained what the heads, tutors and students considered to be the essential criteria of effectiveness. Consequently, a further sample of teachers, tutors and students was sought, to engage in the common experience of teaching practice with all parties using the evaluation instrument, and afterwards recording an independent weighting of the fifteen sub-categories on a five-point scale. The sample was drawn from six teacher training institutions, two in the North, two in the Midlands, and two in the Southern part of the country. Each case comprised a class-teacher, a college tutor and a student, and care was taken to ensure that no tutor or teacher was included in more than one case. After the teaching practice experience, all three members of each case were considered as independent respondents to the weighting procedure, classified only as students, teachers or tutors. In all, returns from 120 students, 120 teachers and 120 tutors were recorded, 20 from

each institution in each group.

The rank orders of importance attached to the fifteen sub-categories (i.e. criteria) were calculated by taking the group mean for each category for the three groups (students, teachers and tutors), and tabulated to show the relationship between the orders. The relationship between the three rankings was then obtained by calculating the Spearman's rho rank correlation coefficient. The correlations proved to be high, indicating that the three groups tend to agree about the relative importance of the fifteen criteria. The correlation between tutors and students proved to be highest (+0.97), between tutors and teachers next (+0.86) and between students and teachers the lowest (+0.82).

Product-moment correlation coefficient matrices were drawn up, and factor analyses were then conducted using the SPSS (Statistical Package for the Social Sciences) system of computer programmes. Initial factors were extracted using the assumptions of classical factor analysis, and all factors with eigen-values greater than or equal to one were input to the rotation procedure. Rotation was performed according to the Varimax criteria and a matrix of factor loadings was obtained.

The findings were recorded by drawing up factor analyses results for each of the following groups:

- (a) students/teachers/tutors
- (b) students only
- (c) teachers only
- (d) tutors only
- (e) students/teachers
- (f) students/tutors
- (g) teachers/tutors.

The author of the study then interpreted the data to reveal five factors:

1. A 'personality' factor, which stressed the importance of:
 - (a) personal relationships with colleagues and senior colleagues
 - and (b) personal qualities and professional behaviour.
2. A factor which emphasised the value of personal relationships with pupils (relationship with the class and individual children - 'contact' with pupils).
3. A preparation and planning factor, concerned with the planning and preparation of teaching resources in general.
4. A factor drawing attention to the vital skills of organisation and teacher performance in the classroom situation.
- and 5. A 'discipline' factor expressing concern for discipline, order and management in the classroom, creating and sustaining interest, stimulating and handling pupils' responses.

(See note at the foot of page 115)

Such factors should be used, of course, in conjunction with the outcome of other relevant work in this field, taking cognisance of anecdotal information such as Blishen's comments (Blishen, E., 1977) on "Teachers for all seasons", the points made by small groups, such as the ten head-teachers in Gerald Grace's study (Grace, G., 1978), the findings of those working in the sphere of Performance or Competency Based Teacher Education (Elam, S., 1971, and the A.A.C.T.E. Committee Report 1974), and researchers like McLeish, J. (1978) who is investigating what he terms "a new analysis of effective teaching".

It was felt, however, that the value of the investigation lay not so much in the factors defined above, but rather in the tabulated results which were open to interpretation by those who sought to use the findings as a basis for criteria to use in the design, implementation and evaluation of professional studies courses. (see pages 203 - 216).

In the publication, "School Experience in Teacher Education", the report of work carried out in the School of Education at Bristol University (Cope, E. 1971.a), in the concluding commentary and suggestions, it was stated that there was considerable room for improvement in the existing system of liaison between schools and colleges. It recommended induction courses for newly appointed members of college staff, and pointed out that teachers do not have a clear understanding of what the college expects of them on school practice, and that

The college's requirements are obscure because neither the lecturers nor the teachers have worked out notions of their respective functions.

Concerning the supervisory and assessment procedures of teaching practice, the report stated that:

1. All three groups in the school practice enterprise must realise their responsibility for evaluation, for evaluation is part of any educational programme.
2. Supervisors and teachers must be aware when grading students that they are evaluating them as part of the process of assisting their learning.
3. Students must be encouraged to accept responsibility for self-evaluation at a

deeper level than that employed in the existing practice of writing critical comments in their school practice files.

4. Teachers must fully accept their share in the responsibility for evaluation,

and concludes by suggesting:

if all three groups could face a shared responsibility for the educational implications of evaluation, then the supervisory procedures would be made more effective without any other modification of existing arrangements.

It is hoped that the present study may make some small contribution towards all four of the points stated above and, in addition, provide a further means of strengthening liaison between school and college. It also suggests the beginnings of a system to enable tutors and teachers to work out notions of their respective functions.

In "A Study of School Supervised Practice" (Cope, E. 1971.b) it is stated:

A consideration of the specifically 'supervisory' elements in the teachers' role within school supervision showed:

....

- (c) that teachers experienced considerable difficulty in implementing the supervisory responsibility of providing the student with feed-back on performance and some form of evaluation

and recommended that:

As teachers' interest in supervisory problems developed, they could work out with tutors strategies for assisting student learning and providing more

adequate feed-back.

It is also hoped, therefore, that the procedure adopted in this experiment may play its part in:

- (a) courses designed for new teacher tutors or professional tutors (James Report 1972)
- (b) initiation courses for newly appointed tutors to institutions for teacher education,
- (c) the difficult task of defining and re-defining criteria of effectiveness, which in due course may contribute to a more and more thorough appraisal of courses designed to cater for the curricular element in the professional training of teachers. This should, of course, continue to open up a very wide field for further research.

Moreover, it would seem that further research is necessary to

- (a) conduct a similar experiment related to the assessment of practical teaching in the secondary school, and the development of criteria of teacher effectiveness which are subject specific
- (b) elaborate and improve upon the training procedure used in this research, for increased understanding between all parties concerned (head and class teachers, tutors and students) in the assessment and evaluation process
- (c) investigate the video-taped approach to illustrate more effectively the various categories (i.e. criteria) included in the evaluation instrument.
- (d) measure the effect of feed-back (from this or similar approaches to assessment of practical teaching) on the

quality of the student's further teaching.

- (e) design courses of professional studies catering for the curricular element in initial teacher education, using the criteria arrived at in this study; implement such courses, and then by use of the Ellis Evaluation Instrument attempt to assess their worth.

In the recently published D.E.S. Report (H.M.I. Series: Matters for Discussion 8) "Developments in the B.Ed. Degree Course: A study based on fifteen institutions" (H.M.S.O. 1979), it is stated that in assessing the quality of school experience H.M.I. were guided by four main criteria, two of which were:

1. the degree to which college staff, students and schools shared understanding of its meaning and purpose;
2. the extent to which it was inter-related with the B.Ed. Course as a whole.

This project has been largely concerned with these factors, and it is hoped that the findings may indicate a possible methodology for a large scale investigation to help colleges actively attempt to promote a shared understanding of school experience in all its forms, for the D.E.S. report states that "only a minority are doing so successfully".

(N.B. The decision to consider factor loadings greater than +.5 or -.5 in interpreting the data, resulted in the emergence of five clear factors. But the additional information revealed by applying the more frequently used rule of thumb of considering all loadings greater than +.3 or -.3, served to confirm the original findings, as well as indicating some important additional features summarised on pages 103 l & m.)

APPENDIX I

- (a) Assessment Form
- (b) Evaluation Instrument (Original)
- (c) Evaluation Instrument (Revised)
- (d) Weighting Instructions and Instrument
- (e) Weighting Instructions for Phase 2 of
the investigation

(a) ASSESSMENT FORM

Used by Students, Head Teachers and Tutors

Ref: A.1/JWE

ASSESSMENT FORM

Date:

STUDENT:

ASSESSOR:

GLOBAL ASSESSMENT AWARDED: _____
(A, B, C, D or E)
Please do NOT use +'s and -'s

For your guidance:

- A. Outstanding student, suitable for distinction category.
(As a Head, I would appoint this student if a vacancy existed, without bothering to advertise.)
- B. Good student, well above average standard.
(If this student applied for a post, I would consider him/her just as seriously as other applicants with several years' experience.)
- C. Average.
(If no experienced teachers applied, I would be happy to fill a vacancy with this student.)
- D. Weak; but passable as a future teacher.
(If no one applied for a post, I would take this student.)
- E. Failure.
(I would rather have a perpetual vacancy than take this student to fill a post.)

(b) EVALUATION INSTRUMENT (ORIGINAL)

-118-

Used by Students, Head Teachers and Tutors,
in Groups "E" and "T" at College No. 1

EVALUATION INSTRUMENT

Items 1 to 5 inclusive: assess each sub-item on 5-point scale
(A,B,C,D or E. Please do not use +'s or -'s).
Enter particulars under 6 (a), (b), (c) & (d).
Tick appropriate comment at 6 (e).

ASSESSOR:

STUDENT:

1. PERSONAL RELATIONSHIPS:

(a) With Pupils:

(Relationship with Class and Individual children
- 'contact' with pupils)

(b) With Colleagues:

(Fellow students in the same school, and other
class-teachers in the school)

(c) With Senior Colleagues:

(Head, deputy, class-teacher of student's class,
tutor: attitude to criticism and advice)

2. PREPARATION & PLANNING:

(a) Planning and Preparation of teaching resources
in general

(b) Suitability of "content"

(Student's knowledge and expertise)

(c) Use of Lesson Note Book

3. CLASSROOM ORGANISATION:

(a) Organisation, distribution and use of material
and apparatus

(b) Use of Audio/Visual Aids (including blackboard)

(c) Discipline, order and management

(Creating and sustaining interest, stimulating
and handling pupils' responses)

4. TEACHER PERFORMANCE:

(a) Presentation of material

(b) Flexibility: ability to modify plans to meet
the demands of the situation

(c) Questioning:

(Aptness, Framing, Distribution, etc.)

5. PERSONAL QUALITIES AND PROFESSIONAL BEHAVIOUR:

(a) Appearance, bearing, dress

(b) Voice and delivery, quality of speech

(c) Contribution to general life of school:
(Assumption of additional responsibilities
and attendance, punctuality, etc.)

6. GENERAL INFORMATION:

(a) Size of class: _____

(b) Age Range of class: _____

(c) Ability Range: _____

(d) Size of School: _____

(e) Do the above factors together with background
conditions (e.g., environmental/social factors,
nature of school building, etc.) make student's
task:

Very difficult

Difficult

Average

or Facilitate the teaching situation

or Greatly facilitate the teaching situation

(Please tick as appropriate)

Ref: A.3/JWE

Used by Students, Head Teachers and Tutors, in
Groups "E" and "T" at Colleges No. 2 and No. 3.

EVALUATION INSTRUMENT

Items 1 to 5 inclusive: assess each sub-item on a five-point
scale (A,B,C,D or E. Please do not use +'s or -'s).

Enter particulars under 6 (a), (b), (c) and (d).

Tick appropriate comment at 6 (e).

ASSESSOR:

STUDENT:

1. PERSONAL RELATIONSHIPS:

(a) With Pupils:

(Relationship with class and individual children
- 'contact' with pupils)

(b) With Colleagues:

(Fellow students, other class teachers and
non-teaching staff in the same school)

(c) With Senior Colleagues:

(Head, deputy, class-teacher of the student's
class, tutor: attitude to criticism and advice)

2. PREPARATION AND PLANNING:

(a) Planning and Preparation of teaching resources
in general

(b) Suitability of "content"

(Student's knowledge and expertise)

(c) Use of Lesson Note Book

(e.g. Preparation, planning, records and
retrospective observations evaluating material,
pupils and self)

3. CLASSROOM ORGANISATION:

(a) Organisation, distribution and use of material
and apparatus

(b) Use of Audio/Visual Aids (including blackboard)

(c) Discipline, order and management

(Creating and sustaining interest, stimulating
and handling pupils' responses.)

4. TEACHER PERFORMANCE:

(a) Presentation of material

(b) Flexibility: ability to modify plans to meet
the demands of the situation

(c) Questioning:

(Aptness, framing, distribution, etc.)

5. PERSONAL QUALITIES AND PROFESSIONAL BEHAVIOUR:

(a) Appearance, bearing, dress

☐

(b) Voice and delivery, quality of speech

☐

(c) Contribution to general life of the school:
(Assumption of additional responsibilities and
duties. General attitude, regularity of
attendance, punctuality etc.)

☐

6. GENERAL INFORMATION:

(a) Size of class: _____

(b) Age Range of Class: _____

(c) Ability Range: _____

(c) Size of School: _____

(e) Do the above factors together with background
conditions (e.g. environmental/social factors,
nature of school building etc.) make student's
task:

Very difficult

Difficult

Average

Facilitate the teaching situation

Greatly facilitate the teaching situation

(Please tick as appropriate)

Ref: A(R)3/JWE

(a) WEIGHTING INSTRUCTIONS AND INSTRUMENT

for Students, Head Teachers and Tutors at College No. 1.

WEIGHTING INSTRUCTIONS FOR EVALUATION INSTRUMENT

Individual assessors probably attach varying degrees of importance to:

(a) THE MAIN CATEGORIES

1. Personal Relationships
2. Preparation and Planning
3. Classroom Organisation
4. Teacher Performance
5. Personal Qualities and Professional Behaviour
6. Prevailing conditions in the specific school and classroom situation.

(b) THE FIFTEEN SUB-CATEGORIES

Will you please indicate the degree of importance you attach to each of the main categories, by putting the appropriate figure in the red 'boxes' on the left hand side of the sheet; and the degree of importance you attach to each sub-category by entering the appropriate figure in the black 'boxes' on the right hand side of the sheet:

- 5 indicates EXTREMELY IMPORTANT
4 indicates VERY IMPORTANT
3 indicates OF AVERAGE IMPORTANCE
2 indicates LESS THAN AVERAGE IMPORTANCE
1 indicates CONSIDERABLY LESS THAN AVERAGE IMPORTANCE

On the back of the pink sheet, will you please list one, two or three criteria (not more) if you feel such items should have been included in the Instrument; indicating the degree of importance of each, using the scale described above.

If you wish to make any comments concerning the instrument, please do so on the remaining portion on the back of the pink sheet.

Please return your form as soon as possible in the envelope provided.

WEIGHTING

(Referred to in the instructions as the "pink sheet")

☐

1. PERSONAL RELATIONSHIPS:

(a) With Pupils:

(Relationship with class and individual children - 'contact' with pupils)

☐

(b) With Colleagues:

(Fellow students in the same school, and other class-teachers in the school)

☐

(c) With Senior Colleagues:

(Head, deputy, class-teacher of student's class, tutor: attitude to criticism and advice)

☐☐

2. PREPARATION AND PLANNING:

(a) Planning and Preparation of teaching resources in general

☐

(b) Suitability of "content"

(Student's knowledge and expertise)

☐

(c) Use of Lesson Note Book

☐☐

3. CLASSROOM ORGANISATION:

(a) Organisation, distribution and use of material and apparatus

☐

(b) Use of Audio/Visual Aids (including blackboard)

☐

(c) Discipline, order and management
(Creating and sustaining interest, stimulating and handling pupils' responses)

☐☐

4. TEACHER PERFORMANCE:

(a) Presentation of material

☐

(b) Flexibility: ability to modify plans to meet the demands of the situation

☐

(c) Questioning

(Aptness, framing, distribution etc.)

☐☐

5. PERSONAL QUALITIES AND PROFESSIONAL BEHAVIOUR:

(a) Appearance, bearing, dress

☐

(b) Voice and delivery, quality of speech

☐

(c) Contribution to general life of school
(Assumption of additional responsibilities and duties. General attitude, regularity of attendance, punctuality, etc.)

☐

6. GENERAL INFORMATION:



(a) Size of class: _____ (b) Age Range of Class: _____

(c) Ability Range: _____ (d) Size of School: _____

(e) Do the above factors together with background conditions (e.g. environmental/ social factors, nature of school building etc.) make student's task:

Very difficult

Difficult

Average

or Facilitate the teaching situation

or Greatly facilitate the teaching situation.

(Please tick as appropriate)

1.

☐

2.

☐

3.

☐

COMMENTS:

(e) Weighting Instructions for Phase 2 of the Investigation
(for Students, Teachers and Tutors)

WEIGHTING INSTRUCTIONS FOR ELLIS EVALUATION INSTRUMENT

Individual assessors probably attach varying degrees of importance to the fifteen sub-categories of the Ellis Evaluation Instrument:

1. Personal relationships with pupils
2. Personal relationships with colleagues
3. Personal relationships with senior colleagues
4. Planning and preparation of teaching resources in general
5. Suitability of "content"
6. Use of lesson note book
7. Organisation, distribution and use of material and apparatus
8. Use of audio/visual aids
9. Discipline, order and management
10. Presentation of material
11. Flexibility
12. Questioning
13. Appearance, bearing, dress
14. Voice and delivery, quality of speech
15. Contribution to general life of the school

Will you please indicate the degree of importance you attach to each sub-category by entering the appropriate figure in the 'box' on the right-hand side of the attached sheet.

- 5 indicates EXTREMELY IMPORTANT
4 indicates VERY IMPORTANT
3 indicates OF AVERAGE IMPORTANCE
2 indicates OF LESS THAN AVERAGE IMPORTANCE
1 indicates OF CONSIDERABLY LESS THAN AVERAGE IMPORTANCE

Please return your form as soon as possible in the envelope provided.

PHASE 2/EVAL.1./JWE

THE ELLIS EVALUATION INSTRUMENT (WEIGHTING)

1. PERSONAL RELATIONSHIPS

(a) With Pupils

(Relationship with class and individual children - "contact" with pupils)

(b) With Colleagues

(Fellow students, other class teachers and non-teaching staff in the same school)

(c) With Senior Colleagues

(Head, deputy, class-teacher of student's class, tutor: attitude to criticism and advice)

2. PREPARATION AND PLANNING

(a) Planning and Preparation of teaching resources in general

(b) Suitability of "content"

(Student's knowledge and expertise)

(c) Use of Lesson Note Book

(e.g. Preparation, planning, records and retrospective observations evaluating material, pupils and self)

3. CLASSROOM ORGANISATION

(a) Organisation, distribution and use of material and apparatus

(b) Use of Audio/Visual Aids (including blackboard)

(c) Discipline, order and management

(Creating and sustaining interest, stimulating and handling pupils' responses)

4. TEACHER PERFORMANCE

(a) Presentation of material

(b) Flexibility: ability to modify plans to meet the demands of the situation

(c) Questioning

(Aptness, framing, distribution, etc.)

5. PERSONAL QUALITIES AND PROFESSIONAL BEHAVIOUR

(a) Appearance, bearing, dress.

(b) Voice and delivery, quality of speech.

(c) Contribution to general life of the school

(Assumption of additional responsibilities and duties. General attitude, regularity of attendance, punctuality, etc.)

APPENDIX II

- (a) Letter to Students
- (b) Letter to Head Teachers
- (c) Letter to Tutors
- (d) General Research Instructions
- (e) Specific Research Instructions
to Students, Heads and Tutors
in Groups "C", "E" and "T"
- (f) Letter to Students, Teachers
and Tutors: Phase 2 of the
Investigation

(a) LETTER TO STUDENTS

ADDRESS:

Ref: (RE)S.1/JWE

DATE:

Dear ,

Assessment of Practical Teaching

Now that your _____ Teaching Practice is about to commence, I am writing to seek your help in an investigation into the methods of assessing practical teaching.

I realise that there are already heavy demands upon your time, but hope that you will be willing to give me the benefit of your opinion in this important project. This will involve self-assessment of your teaching ability, but as the information you supply will be treated as strictly confidential you can be perfectly honest, avoiding mock modesty on the one hand, and self-aggrandisement on the other. I shall be the only person to handle the material you contribute, consequently it can in no way affect your teaching practice, your teaching mark, or in any way influence decisions concerning your professional future. Moreover, only when the data have been processed will the generalised research findings be available to members of the teaching profession, and this summarised evidence will make no reference to any person or institution either by name or by inference.

A copy of the general research instructions is enclosed, together with details of your personal procedure (which I hope you will be willing to follow), and the necessary form(s) for completion.

Please accept my thanks for your help, and may I wish you a happy and successful teaching practice.

Yours sincerely,

(James W. Ellis)

(b) LETTER TO HEAD TEACHERS

ADDRESS:

Ref: (RE)H.1/JWE

DATE:

Dear ,

Assessment of Practical Teaching

Now that another Teaching Practice for the students of _____ College of Education is about to commence, I am writing to seek your help in an investigation into the methods of assessing practical teaching. The Principal and members of the Academic Staff of the College, together with the students concerned have offered their co-operation.

As a former Headmaster of a Primary School myself, I realise that there are already heavy demands upon your time, but hope that you will be willing to give me the benefit of your experience in this important project. If, however, you feel unable to do so, perhaps you would be willing to appoint an experienced member of your staff to deputise for you.

Any information you supply will be treated as strictly confidential, and the data collected will in no way be related to you or your school. Moreover, I shall be the only person to handle the material you contribute, and only when the data have been processed will the generalised research findings be available to members of the teaching profession, and this summarised evidence will make no reference to any person or institution either by name or by inference.

A copy of the general research instructions is enclosed, together with details of your personal procedure (which I hope you will be willing to follow), and the necessary form(s) for completion.

Increasingly we are looking for ways in which the schools can play a more active role in teacher training, and this research is concerned with one approach to this desirable goal.

May I express my thanks in anticipation of your help.

Yours sincerely,

(James W. Ellis)

(c) LETTER TO COLLEGE TUTORS

ADDRESS:

Ref: (RE)T.1/JWE

DATE:

Dear ,

Assessment of Practical Teaching

Now that another Teaching Practice for the Students of _____ College of Education is about to commence, I am writing to seek your help in an investigation into the methods of assessing practical teaching.

I realise that there are already heavy demands upon your time, but I hope that you will be willing to give me the benefit of your experience in this important project. Any information you supply will be treated as strictly confidential, and the data collected will in no way be related to you or the College. Moreover, I shall be the only person to handle the material you contribute, and only when the data have been processed will the generalised research findings be available to members of the teaching profession, and this summarised evidence will make no reference to any person or institution either by name or by inference.

A copy of the general research instructions is enclosed, together with details of your personal procedure (which I hope you will be willing to follow), and the necessary form(s) for completion.

I greatly appreciate the facilities afforded me by the Principal and your colleagues at _____ for this investigation. Please accept my thanks for your help.

Yours sincerely,

(James W. Ellis)

(d) GENERAL RESEARCH INSTRUCTIONS

Ref: (RE)G.1/JWE

An Investigation into the Assessment of Practical Teaching

GENERAL RESEARCH INSTRUCTIONS

1. The project involves Head Teachers (or experienced teachers deputising for Head Teachers), College of Education Tutors, and Second Year Teaching Practice Students.
2. All information supplied will be treated as anonymous, and strictly confidential, and available only to Mr. J.W. Ellis, for collation and processing.
3. Until all the required data have been collected, it is essential that no discussion takes place about the research requests, documents and procedures, between student and student, tutor and tutor, head and head, student and tutor, student and head, or tutor and head. This will ensure that as far as possible all assessments made for the research are the independent, uninfluenced decisions of the persons making them.

(e) SPECIFIC RESEARCH INSTRUCTIONS

(i) Personal instructions for Students in Group "C"

Ref: (RE)S.2/JWE

PERSONAL INSTRUCTIONS FOR:

Student:

Ref.No:

School:

Ref.No:

1. In the week commencing _____
(on _____ or _____) make an independent global self-assessment of teaching ability, on a 5-point scale (details shown on the attached assessment forms), place completed form in envelope provided, seal and hand to the College Tutor.

2. Make a further independent global self-assessment of teaching ability, in the week commencing _____ (on _____ or _____) place in envelope provided, seal and hand to the College Tutor.

Thank you.

(ii) Personal instructions for Students in Group "E"

Ref: (RE)S.3/JWE

PERSONAL INSTRUCTIONS FOR:

Student:

Ref.No:

School:

Ref.No:

1. In the week commencing _____
(on _____ or _____) make
an independent global self-assessment
of teaching ability, on a 5-point scale
(details shown on the attached assessment
form), place completed form in envelope
provided, seal and hand to College Tutor.

2. Make a further self-assessment in the
week commencing _____ (on
_____ or _____), using the
Evaluation Instrument enclosed in the
sealed envelope. PLEASE DO NOT OPEN
THIS ENVELOPE UNTIL YOU HAVE COMPLETED
THE FIRST ASSESSMENT.
Place completed Instrument in envelope
provided, seal and hand to College Tutor.

Thank you.

(iii) Personal instructions for Students in Group "T"

Ref: (RE)S.4/JWE

PERSONAL INSTRUCTIONS FOR:

Student:

Ref.No:

School:

Ref.No:

1. In the week commencing _____
(on _____ or _____) make
an independent global self-assessment
of teaching ability, on a 5-point scale
(details shown on the attached assessment
form), place completed form in envelope
provided, seal and hand to College Tutor.
2. Attend College for video-taped briefing
session on _____ at _____
3. Make a further self-assessment in the
week commencing _____ (on
_____ or _____), using
the procedure explained at the briefing
session, and the Evaluation Instrument
provided on that occasion. Put the
completed Instrument used in the envelope
provided, seal and hand to the College
Tutor.

Thank you.

(iv) Personal instructions for Head Teachers in Group "C"

Ref: (RE)H.2/JWE

PERSONAL INSTRUCTIONS FOR:

Head Teacher:

Ref.No:

School:

Ref.No:

1. In the week commencing _____
(on _____ or _____) make
an independent global assessment of
the teaching ability of the following
students on a 5-point scale (details
shown on the attached assessment forms):

and place in envelope provided, seal
and hand to the College Tutor.

2. Make a further independent global
assessment of the teaching ability of
the above student(s) in the week
commencing _____
(on _____ or _____),
place in envelope provided, seal and
hand to the College Tutor.

Thank you.

(v) Personal instructions for Head Teachers in Group "E"

Ref: (RE)H.3/JWE

PERSONAL INSTRUCTIONS FOR:

Head Teacher:

Ref.No:

School:

Ref.No:

1. In the week commencing _____
(on _____ or _____) make
an independent global assessment of the
teaching ability of the following
students on a 5-point scale (details
shown on the attached assessment forms):

and place in envelope provided, seal
and hand to the College Tutor.

2. Make a further assessment of the above
students in the week commencing _____
_____ (on _____ or _____)
using the Evaluation Instrument enclosed
in the sealed envelope. PLEASE DO NOT
OPEN THIS ENVELOPE UNTIL YOU HAVE COMPLETED
THE FIRST ASSESSMENT.
Place completed Instrument in envelope
provided, seal and hand to College Tutor.

Thank you.

(vi) Personal instructions for Head Teachers in Group "T"

Ref: (RE)H.4/JWE

PERSONAL INSTRUCTIONS FOR:

Head Teacher:

Ref.No:

School:

Ref.No:

1. In the week commencing _____
(on _____ or _____) make an independent global assessment of the teaching ability of the following students on a 5-point scale (details shown on the attached assessment forms):

and place in the envelope provided, seal and hand to the College Tutor.

2. Allow these students to attend College on _____ at _____
3. Attend College yourself for video-taped briefing session on _____ at _____
4. Make a further assessment of the above students in the week commencing _____ (on _____ or _____), using the procedure explained on your visit to College, and the Evaluation Instrument provided on that occasion. Put the completed Instrument used in the envelope provided, seal and hand to the College Tutor.

Thank you.

(vii) Personal instructions for Tutors in Group "C"

Ref: (RE)T.2/JWE

PERSONAL INSTRUCTIONS FOR:

Tutor:

Ref.No:

1. Kindly deliver research material to the Head Teachers and Students concerned, in the schools in which you supervise.
2. In the week commencing _____
(on _____ or _____), make an independent global assessment of the teaching ability of the following students on a 5-point scale (details shown on the attached assessment forms):

and place in the envelope provided and seal.
Collect envelopes from students and head teachers concerned and hand in to _____

3. Make a further independent global assessment in the week commencing _____
(on _____ or _____), place in the envelope provided and seal. Collect envelopes from students and head teachers concerned, and hand in to _____

Thank you.

(viii) Personal instructions for Tutors in Group "E"

Ref: (RE)T.3/JWE

PERSONAL INSTRUCTIONS FOR:

Tutor:

Ref.No:

1. Kindly deliver research material to the Head Teachers and Students concerned, in the schools in which you supervise.
2. In the week commencing _____ (on _____ or _____), make an independent global assessment of the teaching ability of the following students on a 5-point scale (details shown on the attached assessment forms):

and place in the envelope provided and seal. Collect envelopes from students and head teachers concerned, and hand in to _____

3. Make a further assessment of the above students in the week commencing _____ (on _____ or _____), using the Evaluation Instrument enclosed in the sealed envelope. PLEASE DO NOT OPEN THIS ENVELOPE UNTIL YOU HAVE COMPLETED THE FIRST ASSESSMENT. Place completed Instrument in envelope provided and seal. Collect envelopes from students and head teachers concerned and hand in to _____

Thank you.

(ix) Personal instructions for Tutors in Group "T"

Ref: (RE)T.4/JWE

PERSONAL INSTRUCTIONS FOR:

Tutor:

Ref.No:

1. Kindly deliver research material to the Head Teachers and Students concerned, in the schools in which you supervise.
2. In the week commencing _____ (on _____ or _____), make an independent global assessment of the teaching ability of the following students on a 5-point scale (details shown on the attached assessment forms):

and place in the envelope provided and seal. Collect envelopes from students and head teachers concerned, and hand in to _____
3. Allow these students to attend College on _____ at _____
4. Attend College yourself for video-taped briefing session on _____ at _____
5. Make a further assessment of the above students in the week commencing _____ (on _____ or _____), using the procedure explained on your visit to College, and the Evaluation Instrument provided on that occasion. Put the completed Evaluation Instrument used in the envelope provided and seal. Collect envelopes from students and head teachers concerned, and hand in to _____

Thank you.

(f) LETTER TO STUDENTS, TEACHERS AND TUTORS: PHASE 2 OF THE
INVESTIGATION

Ref: PHASE 2/EVAL.3./JWE

ADDRESS:

DATE:

Dear

Assessment of Practical Teaching
Criteria of Teacher Effectiveness

As you have recently been involved (either as a teacher, a tutor or a student) in a period of Teaching Practice when you used the Ellis Evaluation Instrument for the purpose of assessment, I am writing to seek your help in an investigation into the criteria of teacher effectiveness related to the assessment of practical teaching.

I realise that there are already heavy demands upon your time, but I hope that you will be willing to give me the benefit of your considered opinion for this important project. Any information you supply will be treated as strictly confidential, and the data collected will in no way be related to you or the School and College concerned. Moreover, I shall be the only person to handle the material you contribute, and only when the data have been processed will the generalised research findings be available to members of the teaching profession and this summarised evidence will make no reference to any person or institution either by name or by inference.

A copy of the 'weighting' instructions is enclosed together with the necessary form for completion.

I greatly appreciate the facilities afforded me at _____ for this investigation.
Please accept my thanks for your help.

Yours sincerely,

(JAMES W. ELLIS)

APPENDIX III

Simulated material for use with video-tape

- (a) General Information
- (b) Scheme of work
- (c) Lesson notes

A video-tape summarising the research project, and including the simulated classroom situation (used in the Phase I experiment) was produced in connection with this Study.

Persons wishing to borrow the video-tape should apply to the author at the following address:

"The Ropewalk",
3 & 4, Moor View,
TORPOINT,
Cornwall, PL11 2LH

SIMULATED TEACHING SITUATION ON VIDEO-TAPE

- (a) Further information concerning the student on video-tape

PERSONAL RELATIONSHIPS

With Colleagues: Quiet, polite, has very little to say in the staff room situation.

With Senior Colleagues:
Polite, respectful, listens to advice but rarely acts upon it.

PERSONAL QUALITIES AND PROFESSIONAL BEHAVIOUR

Regular in attendance, late on three mornings because of foggy conditions. When class-teacher was absent, took over the running of the class, including registration, etc. and carried out the teacher's playground duty without being asked, having first notified the Head Teacher of the situation.

SIZE OF SCHOOL

320 on roll

Prevailing conditions in the school facilitate the teaching situation.

SCHEME OF WORK AND LESSON NOTES attached.

SIMULATED TEACHING SITUATION

- (b) Student's English Scheme of Work (as presented in
her Note Book)

Number of children in class: 32 (18 girls and 14 boys)

Age Range: 1st and 2nd year Juniors

Multi-ability class

Headmaster: Mr. X.

Class-teacher: Miss Y.

Tutor: Mr. Z.

5 week teaching practice: Time available approximately
3 hours per week

To inspire children to produce soundly creative written
work, both poetry and prose, by presenting them with good
poems and stories:

- (i) read by the teacher
- (ii) told by the teacher
- (iii) read or told by individual
members of the class
- (iv) using Radio Programmes
- (v) using films, etc.

Suitable material: The Pied Piper (Browning)
Hiawatha (Longfellow)
King Hilary and the Beggerman (A.A. Milne)
The Listeners (de la Mare)
The Red Balloon (on film)
The Wishing Chair (Enid Blyton)

To encourage the extension of vocabulary of individual
members of the class.

SIMULATED TEACHING SITUATION

(c) Student's Lesson Notes

Subject: English
Date: 21st January 1971
Length of Lesson: As required (flexible time-table)

Class

Number on roll 32 (18 girls and 14 boys)

Age Range 1st and 2nd year Juniors

Multi-ability group

Apparatus

Balloons
Paper, all types
Paste
Paint

Aim of lesson

To use the interest created by the film
'The Red Balloon' to stimulate creative
writing.

Introduction

Recapitulation of story (using balloons).
Discussion, building up vocabulary lists
on blackboard.

Continuation

Children to continue writing their own
versions of the story (in verse or prose),
making pictures, etc., related to the
story.

Conclusion

Children read their own work to the class.
Enter good work in Class Book of the Red
Balloon.

**ALL MISSING
PAGES ARE
BLANK
IN
ORIGINAL**

APPENDIX IV

- (a) Raw Scores
 - (i) College 1
 - (ii) College 2
 - (iii) College 3
 - (iv) Weighting of Instrument
 - (v) Weighting of sub-categories of the Instrument for Phase 2 of the Investigation
- (b) Statistical Analysis
- (c) Computerised Results
 - (i) Phase I Main Study
 - (ii) Phase II Pilot Study
 - (iii) Phase II Main Study

(a) RAW SCORES

[illegible]

CASE	1ST. ASSESSMENT		COLLEGE 1.																				STUDENT/HEAD/TUTOR		
	2ND. OVERALL	MAIN CATEGORIES	GROUP "E"																						
			SUB-CATEGORIES																						
			1	2	3	4	5	1a	1b	1c	2a	2b	2c	2d	3a	3b	3c	4a	4b	4c	5a	5b	5c	6	
17	B	B	B	B	B	B	B	B	A	B	A	B	C	B	B	B	B	A	B	A	C	B	C	S	
	C	C	B	C	C	C	C	B	B	B	C	C	C	B	C	C	C	C	C	C	C	D	C	D	H
	C	C	B	B	C	C	C	B	C	B	B	C	B	D	C	C	C	D	B	B	D	B	D	T	
18	C	B	B	C	C	C	B	B	B	C	B	C	C	C	B	C	C	B	B	B	A	D	S		
	C	B	B	C	C	C	B	B	B	B	C	C	B	C	C	C	B	C	B	C	A	D	H		
	C	C	B	C	C	C	B	B	B	C	C	C	D	C	B	C	C	D	A	B	B	E	T		
19	C	C	C	C	C	C	C	C	C	C	C	B	C	C	C	C	C	B	C	B	C	C	D	S	
	E	D	D	E	D	D	C	D	C	D	E	E	E	E	D	D	D	E	D	A	C	E	C	H	
	C	C	C	C	C	C	B	C	C	C	B	C	C	C	C	C	C	C	C	B	B	C	T		
20	C	C	B	B	C	C	B	C	B	B	B	C	B	B	C	C	C	C	C	C	B	B	C	S	
	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	A	C	H	
	C	C	B	C	C	C	B	C	B	B	C	C	C	C	C	C	C	C	C	B	C	B	C	T	
21	C	B	B	B	B	B	B	B	C	B	B	B	B	B	B	B	B	B	B	B	B	B	B	S	
	B	A	A	B	B	B	A	A	A	A	B	B	A	C	B	B	B	A	A	A	A	B	H		
	B	B	B	B	B	B	B	B	B	B	A	A	C	B	B	A	B	B	B	A	B	B	C	T	
22	B	B	A	A	B	B	A	B	A	A	A	B	A	C	B	B	A	B	A	A	A	C	S		
	C	B	B	B	C	C	B	C	A	A	B	B	B	C	C	C	C	C	A	C	A	B	H		
	C	C	B	C	C	B	C	B	B	B	C	B	C	C	C	C	C	B	B	C	C	B	C	T	
23	C	B	B	B	C	B	B	B	B	B	C	B	B	C	C	B	B	B	A	B	B	C	S		
	B	A	A	A	A	B	B	B	A	A	A	A	B	A	A	A	A	A	A	A	C	A	B	H	
	B	B	A	B	B	B	B	A	A	A	A	B	B	A	B	B	B	B	B	A	C	B	C	T	
24	B	B	B	B	B	B	B	A	C	B	B	B	C	C	B	A	B	B	B	B	B	B	C	S	
	B	B	B	B	B	B	B	B	B	C	B	B	B	B	B	B	B	B	B	B	B	B	D	H	
	B	B	A	B	B	B	A	A	A	B	B	B	C	B	C	B	B	B	C	A	B	A	D	T	
25	C	B	B	B	C	C	B	B	B	B	B	C	C	B	C	C	C	C	B	C	B	B	S		
	D	C	C	C	C	C	B	C	C	B	C	C	C	C	B	C	C	C	C	B	C	B	H		
	C	C	C	C	C	D	C	C	C	B	C	C	C	C	C	D	D	D	C	B	D	C	A	T	
26	B	A	A	A	A	A	A	A	A	A	A	B	A	A	A	A	A	A	B	A	A	A	C	S	
	A	A	A	B	A	A	A	A	A	A	A	B	B	A	B	A	A	A	B	A	B	A	C	H	
	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	C	T	
27	C	C	B	C	C	C	B	B	B	B	C	C	C	C	C	C	C	C	C	B	B	B	C	S	
	C	B	B	C	C	C	B	C	B	A	B	C	C	C	B	C	C	C	C	A	B	B	D	H	
	C	C	C	C	C	C	C	C	C	B	C	C	C	C	C	C	C	C	C	D	B	C	C	T	
28	C	B	B	B	C	B	B	B	B	B	C	B	C	B	C	B	B	C	B	C	B	C	S		
	C	B	B	C	B	C	B	B	B	A	B	C	C	C	B	B	C	C	B	B	B	B	D	H	
	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	B	C	C	B	D	C	C	T		
29	C	C	B	C	C	C	B	B	A	B	B	B	D	C	C	B	C	C	C	B	C	B	D	S	
	C	C	C	B	C	C	C	C	B	C	B	B	B	C	B	C	C	C	C	B	D	C	D	H	
	C	C	B	C	C	C	C	B	B	C	B	C	C	C	D	C	C	C	C	C	C	B	C	T	
30	C	B	B	B	C	B	B	C	B	B	A	B	B	A	B	D	C	B	C	B	C	B	D	S	
	D	C	C	C	C	D	C	D	C	C	B	D	B	C	C	D	D	C	D	A	C	C	D	H	
	C	C	C	C	C	D	B	D	C	B	B	C	C	C	C	D	D	D	D	B	C	B	C	T	

CASE	COLLEGE 1. GROUP "E"																									
	1st, 2nd	1	2	3	4	5	1a	1b	1c	2a	2b	2c	3a	3b	3c	4a	4b	4c	5a	5b	5c	6				
31	BB	B	C	C	C	B	B	B	C	C	B	C	B	C	C	B	C	B	A	C	D	S				
	CC	C	D	C	C	B	B	C	D	D	C	D	C	D	C	C	B	C	B	B	B	D	H			
	CC	B	C	D	C	C	B	B	B	C	C	C	C	D	D	C	B	C	C	C	B	C	T			
32	BB	B	B	B	B	C	A	B	B	A	B	B	B	B	B	B	B	C	C	C	C	D	S			
	CC	C	D	D	C	B	B	C	C	C	D	D	C	D	D	D	C	C	A	C	C	D	H			
	CC	B	C	C	C	C	B	C	B	B	C	C	C	D	C	C	C	D	B	C	C	E	T			
																						S				
																						H				
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CASE	1ST. ASSESSMENT 2ND. OVERALL	COLLEGE 1. GROUP "T"																				STUDENT/HEAD/TUTOR.	
		MAIN CATEGORIES					SUB-CATEGORIES																
		1	2	3	4	5	1a	1b	1c	2a	2b	2c	3a	3b	3c	4a	4b	4c	5a	5b	5c		6
33	B B	B B	B B	B B	C	B	B B	B A	B B	B B	C	B B	B C	C	B B	S	B	B	B C	C	B B	S	
	B B	A A	B B	B B	B	B	A A	A B	A B	B B	B B	C	A C	A B	B	B	H	A	C	A B	H		
	B B	B B	B B	B C	B	B	B B	B B	B C	C	B B	B B	C	B	C C	C	T	B	C C	C	T		
34	C B	B B	B B	B B	B	B	B B	B B	B B	B B	B B	B B	B B	B B	B B	C	S	B	B	B B	B B	S	
	C B	B B	B B	B B	B	B	B B	A B	B B	B C	B C	C	B B	A A	C C	H	B	B	A A	C C	H		
	B B	B B	B B	B B	A	B	B A	B C	B C	B B	B C	A B	B C	T	B	B	T	A B	B C	T			
35	B B	B C	C	B B	B	B	C B	B C	C C	C	B C	B B	B B	B C	B B	S	B	B	B C	B B	S		
	B B	B C	B B	B B	B	B	C B	B C	C C	B B	B B	B C	B C	B C	B C	H	B	B	B C	B C	H		
	B B	C	B	B B	B	B	C C	B B	B B	B C	B	B B	C	B C	B C	T	B	B	B C	B C	T		
36	B C	B C	C C	C C	C	B	B B	B C	C	B C	C	B C	C C	C	B C	C C	S	B	C	C C	C	S	
	C B	A B	B C	B	B	A	A A	A B	B B	B B	B B	C	B C	A C	B C	H	B	B	A C	B C	H		
	C B	B C	C C	C B	B	B	B B	B C	C	B B	B C	C	B B	C B	C	T	B	B	B C	B C	T		
37	C B	B B	B B	B A	B	B	B A	B B	B B	B B	C	B B	C	A B	A E	S	B	B	C A	B A	E		
	C B	A B	B B	B B	B	B	B A	A B	B B	B B	C	B B	C	A C	B C	H	B	B	C A	B C	H		
	C C	B C	C C	C B	B	C	B B	C C	C	B C	C C	C C	B B	B B	C	T	B	B	B B	B C	T		
38	C B	B C	B B	B B	B	B	B B	B C	C	B B	B B	B C	C	B B	E	S	B	B	B C	B B	E		
	B B	B C	B B	B B	B	B	B B	C	B C	B C	B B	B B	B B	B B	B D	H	B	B	B B	B B	D		
	C B	B C	B B	B B	B	B	B B	B B	D	B B	B C	B B	B B	B B	B C	T	B	B	B B	B B	C		
39	C C	C C	C C	C C	C	C	C C	C C	C C	D	C C	C C	C C	D	C D	S	C	C	C C	D	C D	S	
	C C	C C	C C	C C	C	C	C C	B C	C C	C C	C C	C C	C C	C C	C B	D	H	C	C	C C	B D	H	
	C C	C C	C C	C C	C	C	C C	B C	C C	C C	C C	C C	C C	C C	C B	T	C	C	C C	C B	B T		
40	A A	A A	A A	A A	A	A	A A	A B	A A	B A	A B	A A	B A	A A	A A	D	S	A	B	A A	A A	D	S
	A A	A B	A B	A B	A	B	B A	A A	A C	A A	A A	A A	B A	A A	A A	D	H	A	B	A A	A A	D	H
	A A	A A	A A	A A	A	A	A A	A A	B A	B A	B A	A A	B A	A A	B C	T	A	B	A A	A B	C	T	
41	B B	C B	C	B B	B	B	B C	C	B B	B C	C C	B B	C	B B	B D	S	B	B	B C	B B	B D	S	
	C C	D C	C C	C C	C	C	D D	C	B C	C	B C	C C	C C	C C	B B	C	H	C	C	B B	C D	H	
	C C	B C	C C	C B	B	B	B B	B C	C C	C C	C C	C C	C C	C C	B B	B D	T	B	B	B C	B B	D	
42	B B	B B	B B	B B	B	B	B C	B B	B B	B B	C	B B	B	B B	B D	S	B	B	B B	B B	B D	S	
	B C	C C	B C	B	B	C	C C	B C	C B	B C	B C	B C	B C	B C	B C	H	B	B	B C	B C	B C	H	
	B C	B C	C C	C B	B	B	B C	D C	B C	C C	B C	C C	B B	B B	B C	T	B	B	B C	B B	B C	T	
43	C C	C C	C C	C C	C	C	C C	C C	C C	C C	D	C C	C C	C D	C C	S	C	C	C C	C D	C C	S	
	D D	C D	D D	D C	C	C	D C	C D	D D	D D	D D	D D	D D	D B	D C	B	H	B	D C	B B	D C	B	
	C C	C C	C C	C C	C	C	C D	B C	D C	C D	C D	C C	B C	C C	C C	T	C	C	B C	C C	C C	T	
44	C C	B C	C C	C C	C	C	B B	B B	C C	C C	C C	C C	C C	C C	B C	S	B	B	C C	B C	B S	S	
	B C	B B	C	B C	B	C	B C	B B	B B	B C	C	B C	B B	C C	C D	H	B	B	C C	C C	D	H	
	C C	B C	C C	C C	C	C	B B	B C	C	B C	C C	C C	C C	C C	C B	T	B	B	C C	C C	D	H	
45	C C	C C	C C	C C	C	C	B C	C C	C D	B C	C C	B C	B C	B C	C D	S	C	C	B C	B C	C D	S	
	D D	D D	D D	D C	C	C	D D	D D	D D	D D	D D	D D	D D	D C	C C	D	H	D	D	C C	C C	D	H
	D D	E D	C D	C	C	C	D E	E D	D D	C C	D D	E D	C C	D E	D C	T	D	E	D C	C C	D E	T	
46	A C	C D	B C	C	C	C	B C	D C	C E	B B	B C	B C	C	B E	B S	S	B	B	B C	B E	B S	S	
	D C	C D	C C	C C	C	C	C D	C D	C D	C D	C C	C C	C C	B C	E C	H	B	C	E C	B C	E C	H	
	D C	C C	C C	D C	C	C	C D	C C	C D	C D	C C	D C	C C	D C	D B	T	C	D	C C	D C	D B	T	

[illegible]

COLLEGE 2. GROUP "C"												
CASE	1ST. ASSESSMENT	2ND ASSESSMENT	CASE	1ST. ASSESSMENT	2ND ASSESSMENT	CASE	1ST. ASSESSMENT	2ND ASSESSMENT	CASE	1ST ASSESSMENT	2ND ASSESSMENT	STUDENT/HEAD/TUTOR
49	B B B	B B B	63	C B C	B D C	77	C C C	B B C				S H T
50	B C C	C D B	64	B B C	B C D	78	C C C	C C B				S H T
51	C D D	C D D	65	C C C	B C D	79	B C C	B D C				S H T
52	C C C	B D C	66	D C C	C B D	80	C B C	C B D				S H T
53	C C C	B C D	67	B C C	B C D	81	C E D	C E D				S H T
54	C D D	C C D	68	D D D	D D E	82	C C C	B C D				S H T
55	B C B	B B C	69	C D E	C D E	83	C D D	B C D				S H T
56	B D C	B C D	70	C B C	C B D	84	C D C	B C C				S H T
57	D E E	E E E	71	C C C	C D B	85	C D C	B C D				S H T
58	B C C	B B B	72	C B C	B B D	86	C C D	C C D				S H T
59	B D D	B D D	73	C C C	C C C	87	C B B	C B B				S H T
60	C C C	B D C	74	C C C	C C D	88	B B B	B B B				S H T
61	B B B	B B B	75	C C C	C C C							S H T
62	C D C	B C D	76	C C C	B D C							S H T

CASE	1ST. ASSESSMENT 2ND. OVERALL		COLLEGE 2. GROUP "E"																										STUDENT/HEAD/TUTOR		
	1ST.	2ND.	MAIN CATEGORIES					SUB - CATEGORIES																							
			1	2	3	4	5	1a	1b	1c	2a	2b	2c	3a	3b	3c	4a	4b	4c	5a	5b	5c	6								
89	B	B	C	B	B	C	B	C	C	C	B	B	B	B	B	A	B	C	C	A	C	C	C	S							
	C	B	B	B	B	B	B	B	C	B	B	B	B	B	B	B	C	B	B	B	C	C	H								
	C	B	B	B	B	B	B	B	C	B	B	C	B	B	B	B	B	B	B	A	C	B	D	T							
90	B	B	B	B	B	B	B	B	B	B	B	B	B	B	C	B	B	B	B	B	B	C	B	S							
	C	B	B	B	B	B	B	B	C	B	B	B	B	B	B	B	B	B	B	B	C	B	D	H							
	C	B	B	B	B	B	B	B	C	B	B	B	A	B	B	B	B	B	B	B	C	B	D	T							
91	C	B	A	B	B	C	B	A	A	A	B	B	B	B	C	B	C	B	C	B	C	B	D	S							
	C	B	B	B	C	B	C	B	B	B	B	C	B	C	C	B	B	B	C	D	B	B	D	H							
	C	B	B	B	B	B	C	B	B	B	B	B	B	B	B	B	B	B	B	C	D	C	B	T							
92	C	C	C	B	C	B	B	B	C	C	C	B	B	C	C	B	B	C	B	B	C	B	D	S							
	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	D	H							
	C	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	C	B	D	T							
93	D	C	B	C	C	C	B	B	B	C	C	C	C	C	C	C	C	C	C	C	B	C	B	S							
	E	D	D	E	E	E	D	E	D	D	E	E	E	E	E	E	E	E	E	E	B	E	D	H							
	E	D	D	E	E	E	C	E	D	D	E	E	E	E	E	E	E	E	E	E	B	E	D	T							
94	C	C	C	C	C	C	C	C	C	C	C	C	D	D	C	C	C	D	C	C	C	C	S								
	C	C	B	D	C	B	B	B	B	C	E	C	D	C	C	B	B	B	B	B	B	B	D	H							
	C	C	C	D	C	B	B	B	C	C	E	C	D	C	C	C	B	C	B	B	B	C	D	T							
95	C	B	C	C	C	B	B	B	C	C	C	C	C	C	C	B	C	B	B	B	B	B	S								
	C	C	B	B	C	C	C	C	B	B	B	C	B	C	C	B	C	D	B	C	C	C	B	H							
	B	B	B	B	B	C	B	B	B	C	B	B	B	B	B	B	C	C	C	B	B	C	D	T							
96	C	C	A	C	C	C	C	B	A	A	C	C	C	C	C	C	C	C	C	C	C	C	B	S							
	C	C	B	B	C	C	C	C	B	B	B	B	B	C	C	D	B	C	C	C	C	C	B	H							
	C	B	B	B	B	B	B	B	B	B	B	B	B	B	B	C	B	B	C	B	B	C	D	T							
97	C	C	B	C	C	C	C	B	C	B	C	C	B	C	C	B	C	B	C	C	C	B	B	S							
	C	B	C	B	B	C	B	C	C	B	B	B	C	B	B	C	B	C	C	C	B	B	B	H							
	D	C	C	C	D	C	C	C	C	C	D	C	D	C	D	C	C	C	C	C	C	C	B	T							
98	D	C	C	C	C	C	C	C	C	C	C	C	C	B	C	C	C	C	C	C	C	C	B	S							
	D	C	B	C	C	C	C	B	B	B	C	C	C	B	C	C	C	C	C	C	B	D	B	H							
	D	C	C	C	C	D	C	C	C	C	C	C	C	C	C	D	D	C	D	C	D	C	T								
99	C	C	B	C	C	B	C	B	B	C	C	C	C	C	C	B	B	B	C	B	C	C	B	S							
	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	H								
	C	C	C	C	C	C	C	C	C	D	D	C	C	C	D	C	D	C	C	C	C	D	B	T							
100	C	C	C	C	C	B	B	B	C	C	C	C	C	C	C	C	C	B	C	B	C	B	S								
	D	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	H								
	D	C	C	C	D	C	B	C	C	C	D	C	D	C	D	C	D	D	D	C	D	C	B	T							
101	C	B	B	C	B	B	A	B	B	C	C	C	C	B	C	B	C	B	B	A	B	A	B	S							
	D	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	H								
	D	C	C	D	C	C	C	C	C	C	D	C	D	C	C	C	D	C	C	C	C	D	B	T							
102	C	C	B	C	C	C	B	B	B	C	B	C	C	C	B	C	B	C	C	B	C	B	S								
	D	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	H								
	C	C	C	C	C	C	C	C	C	C	B	C	C	C	B	C	C	C	C	C	D	C	B	T							

CASE	COLLEGE 2. GROUP "E"																							
	1st. 2nd.	1	2	3	4	5	1a	1b	1c	2a	2b	2c	3a	3b	3c	4a	4b	4c	5a	5b	5c	6		
103	CC	B	C	C	C	B	B	B	C	C	C	C	C	C	C	B	C	C	B	B	C	D	S	
	DC	C	C	C	C	C	C	C	B	C	C	C	C	C	C	C	D	C	B	C	C	B	H	
	CB	B	B	B	C	C	B	B	B	B	B	C	C	B	B	C	B	C	C	C	C	C	T	
104	CC	B	C	C	C	B	B	B	C	C	B	C	C	C	C	C	C	B	B	B	C	D	S	
	DC	C	D	D	D	C	D	C	D	D	D	D	D	D	D	D	D	D	B	C	C	B	H	
	CC	B	C	C	C	B	C	B	B	C	C	C	C	C	C	C	C	C	B	A	C	C	T	
105	CC	B	D	C	C	C	B	A	B	D	C	D	B	B	D	C	B	D	C	C	C	B	S	
	CD	C	D	D	D	C	C	C	C	D	D	D	D	D	D	D	D	D	C	C	C	C	H	
	CB	B	C	B	B	B	B	B	B	C	C	C	B	C	B	C	B	B	B	C	B	B	T	
106	CC	B	C	C	C	C	C	B	B	C	C	C	C	C	D	C	C	B	D	C	C	C	B	S
	CD	C	D	D	D	C	C	C	C	D	D	D	D	D	D	D	D	D	C	C	C	C	H	
	CB	B	C	C	C	C	B	B	B	C	B	C	B	C	C	C	B	C	C	C	C	B	T	
107	CB	B	C	C	B	A	B	B	B	C	C	C	C	C	C	B	C	B	B	A	B	A	B	S
	CD	C	D	D	D	C	C	C	C	D	D	D	D	D	D	D	D	D	C	C	C	C	H	
	CC	B	C	C	D	B	B	B	C	C	C	C	C	C	C	C	D	D	B	B	C	B	T	
108	CC	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	B	S
	CD	C	D	D	D	C	C	C	C	D	D	D	D	D	D	D	D	D	C	C	C	C	H	
	CB	B	C	C	C	B	B	B	B	C	C	B	C	C	B	B	C	C	A	C	B	B	T	
109	CC	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	D	S	
	BC	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	D	H	
	CC	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	D	C	T	
110	DC	C	C	D	D	C	C	C	C	D	C	D	C	D	D	D	D	C	D	C	D	S		
	CC	A	C	C	C	B	B	A	A	B	D	B	C	C	C	D	C	C	D	A	C	A	D	H
	CC	C	B	C	C	C	B	C	C	B	B	B	C	B	C	C	C	C	C	D	C	D	T	
111	BB	B	B	B	B	B	B	B	B	B	B	C	C	B	B	B	A	C	C	B	A	D	S	
	DC	B	C	B	C	C	B	C	B	C	C	C	B	C	B	C	B	C	B	C	C	B	H	
	BC	C	B	B	C	C	C	C	C	B	B	B	B	B	C	C	C	B	C	C	B	C	T	
112	CC	B	C	C	C	B	B	C	B	C	C	C	C	C	C	C	B	C	C	B	B	C	S	
	DC	C	C	D	C	C	C	C	C	C	D	C	D	D	C	C	C	C	D	C	B	H		
	CC	C	C	D	C	C	C	C	C	C	D	C	D	D	C	D	C	C	D	C	C	T		
113	CC	B	C	C	C	C	B	C	B	B	C	C	C	C	C	C	B	C	C	C	C	C	S	
	CB	B	B	C	C	C	B	B	B	B	B	B	C	C	B	B	B	C	C	C	B	B	H	
	BB	B	B	B	B	B	B	B	C	B	B	A	B	B	A	B	B	B	B	A	B	C	T	
114	CC	B	C	C	C	C	C	B	B	C	C	C	C	C	C	C	C	C	C	C	C	C	S	
	BB	B	B	B	B	B	B	A	B	B	B	B	B	B	B	B	B	B	B	C	B	B	H	
	BB	A	B	B	B	B	A	A	A	B	C	B	B	B	A	A	B	B	B	B	A	E	T	
115	CC	B	C	C	C	C	C	B	B	C	C	C	C	C	C	C	C	C	C	C	C	C	S	
	CB	B	B	C	C	B	B	B	C	B	B	B	C	C	C	C	C	C	B	C	B	B	H	
	CC	B	C	C	C	B	B	B	C	B	C	C	C	C	C	C	C	C	B	B	B	E	T	
116	CC	B	C	C	C	C	B	B	B	C	C	C	C	C	C	C	C	C	C	B	C	S		
	BB	B	B	B	B	C	B	B	B	B	B	C	B	C	B	B	B	B	B	C	C	A	H	
	CB	A	B	B	B	B	A	A	A	B	B	B	B	B	B	B	B	B	B	B	B	T		
117	CB	B	C	C	C	B	B	B	C	C	C	C	C	C	C	C	B	C	B	B	B	B	S	
	CC	C	C	C	C	C	C	C	B	C	C	C	C	C	D	C	C	C	B	D	C	A	H	
	CC	C	C	C	C	C	C	C	C	C	C	C	C	C	D	C	D	C	C	C	C	A	T	

[illegible]

CASE	1ST ASSESSMENT 2ND. OVERALL	COLLEGE 2. GROUP "T"																								STUDENT/HEAD/TUTOR.		
		MAIN CATEGORIES					SUB - CATEGORIES																					
		1	2	3	4	5	1a	1b	1c	2a	2b	2c	3a	3b	3c	4a	4b	4c	5a	5b	5c	6						
129	CC	B	C	C	C	B	B	B	C	C	C	C	C	C	C	C	C	C	B	C	B	D	S					
	CC	C	C	C	C	C	C	B	C	C	C	C	C	C	C	C	C	C	C	C	C	D	H					
	CC	B	C	C	C	B	B	B	C	C	C	C	C	C	C	C	C	C	C	B	B	C	T					
130	BC	C	C	C	C	B	B	C	C	C	C	C	C	C	C	C	C	C	C	B	B	D	S					
	CC	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	D	H					
	CC	B	C	C	C	B	B	B	C	C	C	C	C	C	C	B	C	C	B	B	B	C	T					
131	BB	B	B	C	B	A	A	B	B	C	B	B	C	C	B	B	B	C	A	A	B	B	S					
	CB	B	B	C	C	B	B	B	C	B	B	C	C	B	C	C	C	C	B	B	B	D	H					
	AB	B	B	B	B	B	A	B	B	B	B	A	B	B	B	A	B	B	B	B	B	B	T					
132	BB	B	B	C	B	B	B	B	B	B	B	C	C	B	B	B	C	B	B	B	A	S						
	CB	B	C	C	C	B	B	B	B	C	C	B	C	C	B	B	C	C	B	B	B	D	H					
	BB	B	B	B	B	B	B	B	B	B	B	B	C	B	B	A	B	B	C	B	B	T						
133	BB	B	B	C	C	B	C	B	B	B	B	B	C	C	B	C	C	B	B	C	B	D	S					
	AB	A	B	B	B	B	A	A	A	B	B	B	C	B	B	B	A	B	B	B	A	C	H					
	BB	B	B	B	B	A	B	B	A	B	B	B	B	B	B	B	C	A	B	A	C	T						
134	CC	B	C	C	C	B	B	B	C	C	B	C	C	C	C	C	C	C	C	B	B	D	S					
	CB	A	B	B	C	B	B	A	A	A	B	B	B	B	B	C	C	C	B	B	B	D	H					
	CC	C	C	C	C	C	C	C	C	C	C	C	C	C	D	C	D	C	D	C	C	B	T					
135	CC	B	C	C	B	C	B	B	B	C	C	B	C	B	C	C	B	B	C	C	C	D	S					
	DC	C	B	B	C	B	C	C	C	B	C	B	B	C	B	B	C	C	B	B	B	D	H					
	CC	C	C	C	C	C	C	C	C	C	C	C	C	D	C	C	C	C	C	C	C	B	T					
136	CD	C	D	D	D	C	C	C	C	D	D	D	D	D	D	D	D	D	C	C	D	C	S					
	DD	D	D	E	D	D	D	D	D	D	E	D	D	E	E	D	E	D	C	D	D	D	H					
	DD	C	D	D	D	C	D	C	B	D	D	D	C	D	D	D	D	D	C	D	C	C	T					
137	CC	B	B	C	C	B	B	B	B	C	B	C	C	C	C	C	C	C	B	B	C	C	S					
	CC	C	C	C	C	B	C	C	C	C	D	C	C	C	C	C	C	C	B	C	B	D	H					
	CC	C	C	C	C	C	C	C	C	C	C	C	D	C	C	C	C	C	B	C	C	C	T					
138	DC	C	C	C	B	C	B	C	C	C	C	C	B	C	B	C	B	C	B	C	B	S						
	DC	C	C	D	D	C	C	C	C	C	D	C	D	E	D	D	D	D	C	C	C	C	H					
	CC	C	C	C	C	C	C	C	B	C	C	B	C	C	C	C	C	C	C	B	C	C	T					
139	BC	C	C	C	C	B	B	C	C	C	C	C	C	C	C	C	C	C	C	B	B	C	B	S				
	CC	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	H					
	CC	C	C	C	C	B	B	C	C	C	C	C	C	C	C	C	C	C	C	B	B	C	T					
140	DB	B	B	B	B	B	A	B	B	B	B	A	B	B	B	A	B	B	B	B	B	B	S					
	CB	B	B	C	B	A	A	B	B	C	B	B	C	C	B	B	B	C	A	A	B	C	H					
	BB	B	B	C	C	B	B	B	B	C	B	B	C	C	B	C	C	C	B	B	B	B	T					
141	CB	B	C	B	C	B	B	B	B	C	C	C	B	B	B	C	C	C	B	B	B	C	S					
	CC	C	C	C	C	C	C	B	C	C	C	C	C	C	C	C	C	C	C	C	C	D	H					
	BC	B	C	C	C	B	B	B	C	C	C	C	C	C	C	C	C	C	C	B	B	D	T					
142	CC	C	C	C	C	C	C	C	B	C	C	C	C	C	C	C	C	C	C	C	C	D	S					
	DC	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	D	H					
	DC	C	C	C	C	C	C	C	B	C	C	C	C	C	C	C	C	C	C	C	C	D	T					

[illegible]

CASE			COLLEGE 2. GROUP "T"																					
	1st. 2nd	1	2	3	4	5	1a	1b	1c	2a	2b	2c	3a	3b	3c	4a	4b	4c	5a	5b	5c	6		
158	BC	B	C	C	C	B	B	B	C	C	B	C	C	C	C	C	C	C	B	B	B	C	S	
	DC	B	C	C	C	B	C	B	C	C	B	C	C	C	C	C	C	C	B	C	B	C	H	
	CC	C	B	C	C	C	C	C	C	B	C	B	C	C	D	D	C	C	B	C	C	C	T	
159	CC	B	C	C	B	B	B	B	C	B	C	C	C	C	C	B	B	B	B	B	C	D	S	
	DC	C	C	D	D	C	D	C	C	C	C	C	D	D	D	D	D	D	B	C	C	C	H	
	CC	C	C	C	C	C	C	D	C	C	D	C	D	B	C	C	C	D	B	C	C	C	T	
160	BC	B	C	C	C	B	B	B	C	C	C	C	C	C	C	C	C	C	B	B	B	C	S	
	CC	B	C	C	C	B	B	B	C	C	C	C	C	B	C	C	C	C	B	B	B	C	H	
	CC	C	C	C	C	B	C	C	C	C	C	D	D	D	B	B	C	C	B	B	C	C	T	
161	CB	B	C	B	C	B	C	A	A	C	C	C	C	B	B	C	B	C	C	C	A	D	S	
	BB	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	C	H	
	BB	B	C	B	C	B	B	B	B	C	B	C	C	B	B	B	C	C	B	B	B	C	T	
162	CC	B	C	C	C	C	B	B	C	C	C	C	B	C	D	C	C	C	C	C	D	B	S	
	DD	D	C	C	D	E	D	D	C	D	C	C	C	C	D	D	D	D	D	E	E	B	H	
	ED	D	D	D	D	C	D	D	D	D	D	C	D	C	E	D	D	E	B	D	D	C	T	
163	CC	C	C	C	C	B	C	C	C	C	C	C	C	C	C	C	C	C	C	B	B	B	C	S
	CC	D	C	C	C	B	C	D	D	C	C	C	C	D	C	C	C	C	B	C	B	C	H	
	CC	D	C	C	C	B	C	D	D	C	C	C	C	D	C	C	C	C	B	B	B	C	T	
164	BC	C	C	C	B	B	C	C	B	C	C	C	C	B	C	B	B	C	B	B	C	B	S	
	DC	C	D	D	C	C	C	C	C	D	D	D	C	D	C	D	C	C	C	D	D	H		
	CC	B	C	C	C	B	C	B	B	C	C	C	C	C	C	C	C	C	B	B	B	C	T	
165	CC	C	B	C	C	B	C	C	C	B	C	B	C	C	D	C	B	C	B	B	C	B	S	
	DC	C	D	D	C	C	C	C	D	D	C	D	D	C	D	C	D	C	C	C	D	D	H	
	DC	D	D	C	C	C	D	C	D	D	C	D	C	C	D	C	C	D	C	C	C	C	T	
166	BB	B	B	B	B	B	B	B	B	A	B	B	B	B	B	B	A	B	B	A	B	D	S	
	BB	A	B	B	A	A	A	A	A	B	B	B	B	A	B	A	A	B	A	A	A	D	H	
	BB	B	B	A	B	B	B	B	B	A	B	A	A	B	B	A	B	B	B	B	B	C	T	
167	CB	B	B	C	C	B	B	B	B	B	B	B	C	C	C	C	B	C	B	C	B	D	S	
	BB	A	B	B	B	B	A	A	A	A	B	B	B	B	B	B	A	B	A	C	B	D	H	
	CB	B	B	C	C	B	B	B	B	B	B	B	C	C	C	C	B	C	B	C	B	C	T	
168	DC	C	C	C	C	B	B	C	C	C	C	C	C	C	C	C	C	C	B	B	B	B	S	
	DC	C	C	C	C	B	B	C	C	C	C	C	C	C	C	C	C	C	B	B	B	B	H	
	DC	C	C	C	C	B	B	C	C	C	C	C	C	C	C	C	C	C	B	B	C	B	T	
																						S		
																						H		
																						T		
																						S		
																						H		
																						T		
																						S		
																						H		
																						T		

COLLEGE 3. GROUP "C"												
CASE	ASSESSMENT		CASE	ASSESSMENT		CASE	ASSESSMENT		CASE	ASSESSMENT		STUDENT/HEAD TUTOR
	1st.	2nd.		1st.	2nd.		1st.	2nd.		1st.	2nd.	
169	C	C	183	C	B	197	C	C	211	C	C	S
	B	C		C	B		B	B		D	E	H
	C	C		C	B		B	B		C	D	T
170	C	B	184	B	B	198	C	C	212	B	B	S
	C	C		B	A		B	B		B	B	H
	C	B		B	A		B	B		A	A	T
171	B	B	185	C	C	199	C	C	213	C	C	S
	B	B		C	B		C	C		C	C	H
	B	B		D	B		C	C		C	C	T
172	C	C	186	C	C	200	C	C	214	C	B	S
	C	C		C	C		C	C		C	B	H
	C	C		C	B		C	C		C	B	T
173	C	C	187	C	D	201	B	C	215	C	C	S
	C	B		C	C		C	B		C	C	H
	C	C		C	B		C	C		C	B	T
174	B	B	188	D	C	202	B	C	216	C	B	S
	B	B		C	D		C	B		C	C	H
	B	B		C	B		C	B		C	B	T
175	C	C	189	B	C	203	B	C	217	C	D	S
	B	C		C	C		C	B		D	D	H
	C	C		C	D		C	B		C	D	T
176	C	C	190	B	C	204	B	B	218	C	B	S
	C	C		C	B		A	A		B	B	H
	C	C		C	B		C	B		B	B	T
177	C	C	191	C	C	205	C	C				S
	C	C		C	C		C	B				H
	C	C		C	D		C	B				T
178	C	C	192	B	B	206	C	C				S
	B	B		A	A		C	C				H
	B	B		C	A		C	C				T
179	C	B	193	D	D	207	C	B				S
	C	D		C	C		C	C				H
	C	C		C	D		B	B				T
180	D	C	194	C	C	208	C	C				S
	B	B		C	C		C	B				H
	C	B		C	C		C	C				T
181	B	B	195	C	C	209	C	C				S
	C	C		B	B		C	C				H
	C	C		B	B		C	C				T
182	D	C	196	C	C	210	C	C				S
	D	D		C	C		D	C				H
	D	C		C	B		C	B				T

CASE	1ST ASSESSMENT 2ND OVERALL	COLLEGE 3.																				STUDENT/HEAD/TUTOR		
		MAIN CATEGORIES					SUB - CATEGORIES																	
		1	2	3	4	5	1a	1b	1c	2a	2b	2c	3a	3b	3c	4a	4b	4c	5a	5b	5c		6	
219	CC	C	B	C	C	C	B	C	C	B	C	B	C	C	C	C	C	C	C	C	C	B	D	S
	DC	B	C	C	C	C	B	B	C	C	C	C	C	C	D	C	D	C	C	D	C	B	H	
	CC	C	C	C	B	C	C	C	C	C	B	B	C	C	B	B	C	C	C	C	C	C	T	
220	BB	B	B	B	B	B	B	B	B	A	B	B	B	B	B	B	C	B	B	B	E	S		
	BB	A	A	B	A	A	A	A	A	B	A	B	B	B	B	A	A	A	B	A	E	H		
	BB	A	B	B	B	B	A	A	A	B	B	B	B	B	B	B	B	B	B	A	D	T		
221	BC	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	S	
	DC	C	D	D	C	C	B	B	D	D	D	E	D	D	C	C	C	D	C	C	C	C	H	
	DC	C	D	D	C	C	C	C	D	D	D	D	D	D	C	C	C	C	C	C	C	C	T	
222	CC	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	S	
	CC	B	C	B	C	C	B	B	B	C	C	C	B	B	B	C	C	C	C	C	C	C	H	
	CC	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	T	
223	CB	B	C	B	B	B	B	B	B	C	C	B	B	B	B	B	B	B	B	B	B	C	S	
	BB	C	B	B	B	C	B	C	C	B	B	B	B	B	A	B	B	B	C	C	B	C	H	
	BB	B	B	B	A	A	B	B	B	B	B	A	B	B	A	A	A	A	A	B	C	T		
224	CC	C	C	B	C	C	C	C	C	C	C	C	B	B	B	C	C	C	C	C	C	C	S	
	CC	B	C	B	C	B	B	B	B	C	C	C	B	B	C	C	C	D	B	C	B	C	H	
	CC	C	C	C	B	B	C	C	C	C	C	C	C	C	B	B	B	B	B	B	C	T		
225	CB	B	B	C	B	B	C	B	B	B	B	B	B	B	D	B	B	B	B	B	B	C	S	
	BB	B	B	C	B	B	C	A	A	B	B	B	C	C	C	C	B	B	A	B	B	C	H	
	BB	B	B	C	C	B	C	B	B	B	B	B	C	C	C	C	C	B	B	B	C	T		
226	CC	B	B	C	C	C	B	B	B	B	B	B	C	B	C	C	C	C	C	C	C	D	S	
	BC	B	B	C	C	C	C	B	B	B	C	B	C	C	C	C	C	C	C	B	C	D	H	
	CC	C	C	C	C	C	C	C	C	C	D	C	C	B	C	C	C	D	C	C	C	T		
227	CC	D	C	C	C	C	D	D	D	C	C	C	C	C	C	C	C	C	C	C	C	C	S	
	DC	C	C	C	C	C	D	C	C	C	C	C	C	C	D	C	C	C	C	C	D	B	H	
	DC	D	C	C	C	D	D	D	D	C	C	C	C	C	C	B	C	C	C	D	D	C	T	
228	CB	A	C	C	B	B	A	A	B	C	B	D	C	C	B	B	A	B	B	C	C	S		
	CB	A	C	C	C	B	A	A	A	C	C	C	C	C	B	C	C	C	B	B	C	D	H	
	BB	C	C	B	B	C	B	C	C	C	B	C	B	B	A	B	B	A	C	B	C	T		
229	CB	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	D	S	
	BB	A	B	B	B	C	A	A	A	B	B	C	B	C	B	B	A	B	C	B	C	D	H	
	BB	A	B	B	A	B	B	A	A	B	C	B	B	B	B	A	A	B	B	B	C	D	T	
230	BC	B	C	C	B	B	B	B	B	C	C	D	D	C	B	C	B	B	B	B	B	E	S	
	DC	B	D	C	C	C	B	B	B	D	C	D	D	D	B	B	D	D	B	E	B	D	H	
	DC	C	D	D	C	C	C	B	C	E	D	D	D	D	D	C	C	D	B	D	B	D	T	
231	CC	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	S	
	CC	C	D	C	D	C	C	C	D	C	D	D	C	C	C	D	D	C	C	C	C	C	H	
	DC	D	D	C	D	C	D	D	D	C	D	D	C	D	C	D	D	D	A	D	C	C	T	
232	ED	D	E	E	E	D	E	D	D	E	E	E	E	E	E	E	E	E	B	E	D	C	S	
	ED	D	E	E	E	C	E	D	D	E	E	E	E	E	E	E	E	E	B	E	D	D	H	
	EC	B	C	C	C	B	B	B	C	C	C	C	C	C	C	C	C	C	B	C	B	C	T	

CASE	COLLEGE 3. GROUP "E"																									
	1st, 2nd	1	2	3	4	5	1a	1b	1c	2a	2b	2c	3a	3b	3c	4a	4b	4c	5a	5b	5c	6				
233	CC	CC	CC	CC	CC	CC	CC	CC	CC	CC	CC	CC	CC	CC	CC	CC	CC	CC	CC	CC	CC	CC	S			
	DC	CC	CC	CC	CC	CC	CC	CC	CC	CC	CC	CC	CC	CC	CC	CC	CC	CC	CC	CC	CC	CC	H			
	CC	DC	CC	CC	DD	CC	CC	CC	CC	CC	CC	CC	CC	CC	CC	CC	CC	CC	CC	CC	CC	CC	T			
234	CC	BB	CC	CC	CC	CC	CC	BB	BB	BB	BB	CC	CC	CC	CC	CC	CC	CC	CC	CC	CC	CC	S			
	BB	BB	BB	BB	BB	BB	BB	BB	BB	BB	BB	BB	BB	BB	BB	BB	BB	BB	BB	BB	BB	BB	H			
	DC	AC	CC	CC	CC	CC	BA	AC	CC	CC	CC	CC	CC	CC	CC	CC	CC	CC	CC	CC	CC	T				
235	CB	BB	BB	CC	BB	CC	BB	BB	BB	CC	BB	BB	CC	CC	CC	CC	CC	CC	CC	CC	CC	CC	S			
	BB	BA	BB	BB	BB	BB	BA	BA	BA	BA	BB	BB	BA	BB	BA	BB	BA	BB	BA	BB	BA	BB	H			
	CB	BA	CC	CC	CC	CC	BB	BA	BA	BA	BB	CC	CC	CC	CC	CC	CC	CC	CC	CC	CC	T				
236	CC	CC	CC	CC	CC	CC	CC	CC	CC	CC	CC	CC	CC	CC	CC	CC	CC	CC	CC	CC	CC	CC	S			
	CC	BB	CC	CC	CC	CC	BB	BB	BB	CC	CC	CC	CC	CC	CC	CC	CC	CC	CC	CC	CC	H				
	CC	CC	CC	CC	CC	CC	BB	BB	CC	CC	CC	CC	CC	CC	CC	CC	CC	CC	CC	CC	CC	T				
237	CC	CC	CC	CC	CC	CC	CC	CC	CC	CC	CC	CC	CC	CC	CC	CC	CC	CC	CC	CC	CC	S				
	CC	CC	CC	CC	CC	CC	CC	CC	CC	CC	CC	CC	CC	CC	CC	CC	CC	CC	CC	CC	CC	H				
	CC	CC	CC	CC	CC	CC	CC	CC	CC	CC	CC	CC	CC	CC	CC	CC	CC	CC	CC	CC	CC	T				
238	CB	CC	CC	CC	CC	CC	CC	CC	CC	CC	CC	CC	CC	CC	CC	CC	CC	CC	CC	CC	CC	S				
	CC	CC	CC	CC	CC	CC	CC	CC	CC	CC	CC	CC	CC	CC	CC	CC	CC	CC	CC	CC	CC	H				
	CC	CC	CC	CC	CC	CC	CC	CC	CC	CC	CC	CC	CC	CC	CC	CC	CC	CC	CC	CC	CC	T				
239	CB	BB	BB	BB	BB	BB	BB	BB	BB	BB	BB	BB	BB	BB	BB	BB	BB	BB	BB	BB	BB	S				
	BB	BA	CC	BB	BB	BB	BB	BA	AA	BB	CC	CC	BB	BA	BB	BA	BB	BA	BB	BA	BB	H				
	BB	BB	BB	BB	BB	BB	BB	BB	BA	BB	CC	CC	BB	BB	BB	BB	BB	BB	BB	BB	BB	T				
240	BA	AA	AA	AA	AA	AA	AA	AA	AA	AA	AA	AA	AA	AA	AA	AA	AA	AA	AA	AA	AA	S				
	BA	AA	AA	AA	AA	AA	AA	AA	AA	AA	AA	AA	AA	AA	AA	AA	AA	AA	AA	AA	AA	H				
	BA	AA	AA	AA	AA	AA	AA	AA	AA	AA	AA	AA	AA	AA	AA	AA	AA	AA	AA	AA	AA	T				
241	BB	BB	BB	BB	BB	BB	BB	BB	BB	BB	BB	BB	BB	BB	BB	BB	BB	BB	BB	BB	BB	S				
	BB	AA	BB	BB	BB	BB	AA	AA	AA	AA	AA	AA	AA	AA	AA	AA	AA	AA	AA	AA	AA	H				
	BB	BA	BB	BB	BB	BB	BA	AA	AA	AA	AA	AA	AA	AA	AA	AA	AA	AA	AA	AA	AA	T				
242	BB	BB	BB	BB	BB	BB	BB	BB	BB	BB	BB	BB	BB	BB	BB	BB	BB	BB	BB	BB	BB	S				
	BB	AA	BB	BB	BB	BB	AA	AA	AA	AA	AA	AA	AA	AA	AA	AA	AA	AA	AA	AA	AA	H				
	BB	AA	AA	AA	AA	AA	AA	AA	AA	AA	AA	AA	AA	AA	AA	AA	AA	AA	AA	AA	AA	T				
243	CB	BB	BB	BB	BB	BB	BB	BB	BB	BB	BB	BB	BB	BB	BB	BB	BB	BB	BB	BB	BB	S				
	BB	BB	BB	BB	BB	BB	BB	BB	BB	BB	BB	BB	BB	BB	BB	BB	BB	BB	BB	BB	BB	H				
	AB	BB	AA	AA	AA	AA	BB	BB	BB	BB	BB	BB	BB	BB	BB	BB	BB	BB	BB	BB	BB	T				
244	BB	AA	BB	CC	BB	BB	AA	AA	BB	BB	BB	BB	BB	BB	BB	BB	BB	BB	BB	BB	BB	S				
	CB	AA	BB	BB	BB	BB	AA	AA	BB	BB	BB	BB	BB	BB	BB	BB	BB	BB	BB	BB	BB	H				
	AB	AA	BB	BB	BB	BB	AA	AA	BB	BB	BB	BB	BB	BB	BB	BB	BB	BB	BB	BB	BB	T				
245	CB	BB	CC	CC	CC	CC	AA	BB	BB	BB	BB	BB	BB	BB	BB	BB	BB	BB	BB	BB	BB	S				
	BB	AA	BB	BB	BB	BB	AA	AA	BB	BB	BB	BB	BB	BB	BB	BB	BB	BB	BB	BB	BB	H				
	CB	BB	CC	CC	CC	CC	BB	BB	BB	BB	BB	BB	BB	BB	BB	BB	BB	BB	BB	BB	BB	T				
246	BB	CC	CC	CC	CC	CC	BB	BB	BB	BB	BB	BB	BB	BB	BB	BB	BB	BB	BB	BB	BB	S				
	BB	BA	BB	CC	CC	CC	AA	AA	AA	AA	AA	AA	AA	AA	AA	AA	AA	AA	AA	AA	AA	H				
	BB	BA	AA	BB	BB	BB	BA	AA	AA	AA	AA	AA	AA	AA	AA	AA	AA	AA	AA	AA	AA	T				
247	BC	CC	CC	CC	CC	CC	CC	CC	CC	CC	CC	CC	CC	CC	CC	CC	CC	CC	CC	CC	CC	S				
	CC	CC	CC	CC	CC	CC	CC	CC	CC	CC	CC	CC	CC	CC	CC	CC	CC	CC	CC	CC	CC	H				
	CC	BB	CC	CC	CC	CC	CC	CC	CC	CC	CC	CC	CC	CC	CC	CC	CC	CC	CC	CC	CC	T				

CASE	COLLEGE 3. GROUP "E"																									
	1st. 2nd	1	2	3	4	5	1a	1b	1c	2a	2b	2c	3a	3b	3c	4a	4b	4c	5a	5b	5c	6				
248	DD	C	E	E	D	B	C	C	C	E	D	E	E	E	D	D	D	D	B	B	C	A	S			
	DD	D	E	E	D	C	E	C	E	E	D	E	D	E	E	E	D	C	C	C	D	B	H			
	DD	D	E	E	E	D	E	C	D	E	D	E	E	E	E	D	E	E	C	D	E	A	T			
249	DC	C	C	C	C	C	C	C	C	C	C	C	C	C	D	C	C	D	C	D	C	A	S			
	CC	C	C	C	C	C	C	C	C	B	C	C	C	C	C	C	C	C	C	C	D	B	H			
	CC	C	C	D	C	B	E	B	B	C	D	C	D	D	E	C	C	C	B	B	C	A	T			
250	CB	B	A	B	B	B	B	C	B	A	B	A	B	C	B	B	B	B	B	B	B	B	S			
	CB	C	B	C	C	B	C	C	C	B	B	B	C	B	C	C	C	B	B	B	B	B	H			
	BB	A	A	A	B	A	A	A	B	B	A	A	A	B	B	B	B	A	A	B	C	T				
251	BB	C	B	B	B	B	B	C	C	B	B	B	B	C	B	B	B	B	B	B	C	B	S			
	CB	B	B	B	B	B	B	B	B	A	B	B	B	B	B	B	B	B	B	B	B	C	H			
	BB	A	B	B	B	B	A	A	B	B	A	B	B	B	A	B	B	B	A	B	B	D	T			
252	CC	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	S				
	CC	C	D	C	C	C	C	C	D	C	D	C	C	C	D	C	C	C	C	D	B	H				
	CB	B	C	B	B	A	B	B	C	C	C	B	C	B	C	B	B	A	B	A	B	T				
253	DD	C	D	D	D	C	C	C	D	D	D	D	D	D	D	D	D	C	C	C	C	S				
	CC	B	C	C	D	B	B	B	C	C	C	C	C	C	C	D	D	B	B	C	B	H				
	DB	B	C	C	B	A	B	B	B	C	C	C	C	C	B	C	B	B	A	B	A	T				
254	BB	B	B	C	C	C	B	B	B	B	B	B	C	C	B	B	B	C	C	C	B	S				
	CB	B	B	B	B	B	B	B	C	B	B	A	B	B	A	B	B	B	A	B	C	H				
	CC	B	C	C	C	C	B	C	B	B	C	C	C	C	C	B	C	C	C	C	C	T				
255	CB	B	B	B	B	B	B	A	B	B	B	B	B	B	B	B	B	B	B	C	B	S				
	CB	A	B	B	B	B	A	A	A	B	C	B	B	B	A	A	B	B	B	B	A	H				
	CC	B	C	C	C	C	C	B	B	C	C	C	C	C	C	C	C	C	C	C	C	T				
256	CB	B	B	C	C	B	B	B	C	B	B	B	C	C	C	C	C	C	B	C	B	S				
	CC	B	C	C	C	B	B	B	C	B	C	C	C	C	C	C	C	C	B	B	B	H				
	CC	B	C	C	C	C	C	B	B	C	C	C	C	C	C	C	C	C	C	C	C	T				
257	CC	C	C	C	C	C	C	C	B	C	C	C	C	C	C	D	C	C	C	B	D	A	S			
	CC	C	C	C	C	C	C	C	C	C	C	C	C	C	C	D	C	D	C	C	C	A	H			
	CB	B	C	C	C	B	B	B	C	C	C	C	C	C	C	C	C	B	C	B	B	T				
258	EC	C	C	C	C	C	C	C	B	C	C	C	C	C	C	D	C	D	C	C	C	S				
	EC	B	B	C	D	C	D	B	A	A	C	B	C	C	D	C	D	D	C	D	C	H				
	EB	B	B	B	C	B	B	B	B	B	A	C	B	B	C	B	C	B	B	C	C	T				
259	BC	B	C	C	C	C	C	B	B	C	C	C	C	C	C	C	C	B	C	C	B	S				
	CC	B	C	C	C	B	B	A	B	B	C	C	C	D	C	C	C	C	A	C	B	H				
	CC	C	C	C	C	C	C	C	C	C	C	C	D	C	D	C	C	B	D	C	C	T				
260	EC	C	C	D	B	C	C	B	C	C	C	B	C	D	D	B	B	B	B	D	C	S				
	EC	C	C	D	D	C	C	C	C	D	C	C	D	D	D	D	D	D	C	C	C	H				
	EC	C	C	D	D	C	C	D	C	C	C	C	D	D	D	D	D	D	C	C	C	T				
261	BC	B	C	B	B	C	B	C	B	D	C	C	C	B	B	C	B	B	B	D	B	S				
	CC	B	C	C	C	B	B	B	B	C	C	C	C	C	C	C	B	C	B	C	B	H				
	CC	C	C	C	C	B	C	C	B	B	C	C	C	C	B	C	C	C	B	C	B	T				
262	BB	B	B	C	C	B	A	B	B	C	B	B	C	C	B	B	C	C	A	C	B	S				
	CC	A	C	C	C	B	B	A	A	C	C	D	C	C	B	C	B	C	A	C	D	H				
	CB	B	C	B	B	B	A	B	C	C	C	C	C	B	B	C	B	B	B	B	D	T				

[illegible]

CASE	1ST ASSESSMENT 2ND OVERALL	COLLEGE 3. GROUP "T"																				STUDENT/HEAD/TUTOR		
		MAIN CATEGORIES					SUB-CATEGORIES																	
		1	2	3	4	5	1a	1b	1c	2a	2b	2c	3a	3b	3c	4a	4b	4c	5a	5b	5c		6	
269	CB	B	B	B	B	B	B	A	B	B	B	B	B	B	C	B	C	B	C	B	B	D	S	
	BB	B	C	C	C	B	B	B	B	C	C	B	C	C	C	C	C	C	B	B	B	C	H	
	CB	B	B	C	C	B	B	C	B	B	C	C	C	C	C	C	C	C	B	B	B	B	T	
270	BB	B	B	B	B	A	B	B	B	B	B	B	B	B	B	B	B	B	A	A	A	B	S	
	CB	C	B	B	C	B	B	C	C	C	B	B	B	C	B	B	C	C	B	B	B	B	H	
	CB	B	B	C	C	B	B	B	B	B	B	C	C	C	C	C	C	C	A	B	C	C	T	
271	CC	C	C	C	C	B	C	C	C	C	C	C	C	C	D	C	C	C	B	B	C	B	S	
	CC	C	C	B	C	C	C	C	C	B	B	B	C	C	C	B	C	D	B	C	C	C	H	
	BC	C	C	C	C	B	C	C	C	B	C	C	C	D	C	C	C	B	B	B	C	C	T	
272	CD	D	C	D	D	C	D	D	D	C	C	C	D	D	D	D	D	D	D	C	C	B	S	
	DD	D	D	D	D	C	D	D	D	D	C	D	D	D	D	D	D	D	C	B	D	C	H	
	CD	D	C	D	D	D	D	C	D	C	C	C	D	D	E	C	D	E	D	D	C	C	T	
273	BB	B	B	B	B	C	A	B	B	B	B	B	B	B	C	B	C	B	B	C	C	B	B	S
	CB	B	B	B	B	B	B	B	A	B	B	B	B	B	C	B	B	B	B	A	B	B	C	H
	CB	B	B	B	C	B	B	B	B	B	B	B	B	C	C	C	C	B	C	B	C	B	C	T
274	DC	C	D	C	D	D	C	C	C	D	C	D	C	C	D	D	D	C	D	D	C	D	S	
	DC	C	D	C	C	D	C	C	C	D	C	D	C	C	D	C	C	C	D	D	C	C	H	
	DC	C	D	C	C	C	C	C	C	D	C	D	C	C	C	C	C	C	C	C	C	C	T	
275	CB	A	B	B	C	B	B	A	A	B	B	C	C	B	B	B	C	C	A	B	B	A	S	
	BB	B	B	B	C	B	B	B	A	B	C	B	C	B	B	C	C	C	A	B	B	C	H	
	CB	B	C	C	C	B	B	B	B	C	C	B	C	C	B	C	C	C	A	C	B	C	T	
276	CC	B	C	C	C	C	B	B	B	C	C	C	C	C	C	C	C	C	B	C	C	D	S	
	EC	B	C	C	C	C	B	C	B	C	C	C	C	C	C	C	C	C	B	C	C	D	H	
	CC	C	C	D	C	C	C	C	C	C	C	C	D	C	D	C	C	D	A	D	C	D	T	
277	BB	B	B	B	C	C	B	B	B	B	B	B	B	B	B	C	C	C	B	C	C	D	S	
	BB	B	B	B	B	C	B	B	B	B	B	B	B	B	B	B	C	B	B	C	C	D	H	
	BB	B	A	B	C	B	B	B	B	A	A	B	A	C	B	C	C	C	A	B	B	D	T	
278	CC	C	C	C	C	C	B	C	C	C	C	C	C	C	C	C	B	C	C	C	C	B	S	
	CC	C	C	C	C	C	B	C	C	B	C	C	C	C	D	C	B	C	C	C	C	C	H	
	CC	B	B	C	C	C	C	B	B	B	B	C	C	C	D	C	C	D	B	C	C	B	T	
279	BC	B	C	C	C	B	B	B	B	B	C	C	B	C	C	C	C	C	B	B	B	D	S	
	DC	B	C	C	C	C	B	B	B	B	C	C	B	C	D	C	D	C	B	D	B	D	H	
	CC	C	C	C	D	C	C	C	C	C	C	D	C	C	D	D	C	D	C	C	C	C	T	
280	BC	C	C	C	B	C	C	C	C	B	D	C	D	B	D	C	A	C	B	B	D	B	S	
	DC	D	B	C	C	C	D	D	D	A	B	B	C	C	D	C	D	C	C	D	C	D	H	
	CC	D	C	C	C	C	C	D	D	B	C	C	C	C	D	C	C	D	C	C	D	C	T	
281	CC	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	S	
	CC	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	D	H	
	CC	C	C	C	C	C	C	C	D	C	C	C	C	C	C	C	D	C	C	C	C	C	T	
282	CB	B	B	C	C	B	B	B	B	B	B	B	B	C	C	B	C	C	B	B	B	C	S	
	CB	B	B	C	C	B	B	B	B	C	B	B	C	B	C	C	B	C	B	B	B	D	H	
	CB	B	B	B	C	B	B	B	B	B	B	B	B	C	B	B	C	C	B	B	B	C	T	

CASE	COLLEGE 3. GROUP "T"																									
	1st 2nd	1	2	3	4	5	1a	1b	1c	2a	2b	2c	3a	3b	3c	4a	4b	4c	5a	5b	5c	6				
283	BA	A	A	A	A	A	A	A	A	A	B	A	A	A	A	A	A	A	A	A	A	E	S			
	BC	D	C	C	B	B	B	D	E	C	C	C	C	C	C	B	B	B	B	B	C	D	H			
	BB	C	C	B	B	B	A	C	D	C	C	C	C	B	B	B	C	B	A	A	C	C	T			
284	BB	B	B	C	B	C	B	B	B	C	B	B	C	C	B	B	B	B	C	C	C	S				
	BB	C	B	B	B	C	B	C	C	B	B	B	B	C	B	B	B	B	B	C	C	D	H			
	CB	B	B	C	C	B	B	B	B	B	B	B	C	C	C	C	C	C	A	C	B	C	T			
285	BC	C	B	C	C	B	B	C	C	B	B	B	B	C	C	B	C	C	B	C	B	D	S			
	BC	C	B	C	C	C	B	C	C	B	B	B	B	C	C	B	C	C	B	C	C	C	H			
	BC	C	C	C	C	B	C	B	C	C	D	C	C	C	C	C	C	C	B	C	B	C	T			
286	CC	B	C	C	C	C	B	B	C	C	C	C	C	C	C	C	C	C	C	C	C	S				
	DC	C	B	D	C	B	C	C	C	B	B	B	D	D	C	B	D	C	A	A	C	C	H			
	CC	C	C	D	C	C	C	C	C	C	C	D	C	D	D	C	C	C	B	C	C	C	T			
287	DC	C	C	D	C	C	D	C	C	C	C	C	C	D	D	C	D	C	C	D	C	B	S			
	DC	C	B	C	C	C	C	D	B	B	B	C	C	D	C	D	C	B	C	D	B	H				
	CC	C	B	C	C	C	C	D	B	B	B	C	C	C	C	C	C	C	D	C	B	T				
288	CC	C	C	D	C	C	C	C	B	C	D	C	D	D	C	C	C	B	D	B	C	S				
	CC	C	C	C	C	B	C	C	B	B	C	C	C	C	B	C	B	C	B	C	B	H				
	CC	C	C	C	C	B	C	C	B	C	C	C	C	C	C	C	C	B	C	B	C	T				
289	CC	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	B	C	C	D	S			
	DC	C	C	C	C	C	C	C	C	C	C	C	C	D	C	D	C	B	C	C	C	H				
	DC	C	C	C	C	C	C	C	C	C	B	C	D	C	D	C	C	C	D	C	C	T				
290	CB	C	B	C	B	B	B	C	C	B	C	B	B	C	C	B	B	B	B	B	B	C	S			
	CB	B	B	C	B	B	B	C	B	B	C	B	C	C	B	B	B	B	B	B	B	C	H			
	BB	B	B	B	B	A	B	B	B	B	B	B	B	B	B	B	B	B	A	B	A	C	T			
291	CC	B	C	C	C	B	C	B	B	C	C	B	C	C	C	C	C	C	B	C	B	C	S			
	CC	C	B	C	C	C	C	C	B	C	B	C	C	D	D	C	C	B	C	C	C	H				
	DC	B	C	C	C	B	B	B	C	C	B	C	C	C	C	C	C	C	B	B	B	C	T			
292	CC	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	D	S			
	CC	C	C	C	C	C	C	C	C	C	C	C	D	C	C	C	C	D	C	C	C	D	H			
	CC	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	T				
293	CB	B	C	B	B	B	B	B	B	C	C	B	B	B	B	C	B	B	B	B	C	S				
	CB	B	B	B	C	B	B	B	B	B	C	B	B	B	B	C	C	B	C	B	D	H				
	BB	B	C	C	B	C	B	B	B	B	C	C	B	C	C	B	C	B	C	C	C	B	T			
294	DB	B	B	B	B	B	B	B	A	B	B	A	B	B	B	B	B	B	C	A	B	S				
	CB	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	H				
	BB	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	T				
295	BC	C	B	C	C	B	C	C	C	B	B	B	C	B	C	C	C	C	B	C	B	S				
	CC	C	B	C	C	B	C	C	C	B	B	B	C	B	C	C	C	C	B	C	B	D	H			
	CC	C	B	C	D	B	C	C	C	B	B	C	C	B	D	D	D	D	B	C	B	C	T			
296	BB	B	B	C	B	B	B	B	B	B	C	B	C	C	B	B	B	B	B	B	A	B	S			
	BB	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	C	H			
	BB	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	T				
297	CB	B	C	B	C	B	B	A	B	C	C	A	B	C	C	C	C	C	B	B	B	C	S			
	CB	B	C	B	C	B	B	B	B	C	C	C	B	B	C	C	C	C	B	B	B	C	H			
	CB	B	C	B	C	B	B	B	B	C	C	C	B	B	C	C	C	C	B	B	B	C	T			

CASE	COLLEGE 3. GROUP "T"																											
	1st 2nd	1	2	3	4	5	1a	1b	1c	2a	2b	2c	3a	3b	3c	4a	4b	4c	5a	5b	5c	6						
298	CB	BB	C	C	C		B	B	B	A	C	B	B	C	C	B	C	C	B	C	C	B	S					
	CB	BB	C	C	C		B	C	B	B	B	B	C	C	C	B	C	C	B	C	C	B	H					
	CB	BB	B	B	B	B	B	B	A	C	B	B	B	B	B	B	B	B	A	B	B	C	T					
299	DC	C	C	D	D	C	B	C	C	C	D	C	D	C	D	D	C	D	B	D	C	B	S					
	CC	C	C	D	D	C	C	C	C	C	C	C	D	D	D	D	D	C	D	C	B	H						
	CC	C	B	C	C	B	D	C	C	B	C	B	C	C	D	C	C	C	B	B	B	A	T					
300	CC	C	C	D	D	C	B	D	C	C	C	C	D	C	D	C	D	D	B	D	D	A	S					
	CC	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	B	C	C	B	H					
	CC	C	C	C	C	C	C	C	C	C	C	C	C	C	D	C	C	C	C	C	C	A	T					
301	CB	BB	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	C	S					
	BB	B	C	B	C	B	B	B	B	C	B	C	C	B	B	B	C	C	B	B	B	C	H					
	BB	B	C	B	C	B	C	A	A	C	C	C	C	B	B	C	B	C	C	C	A	D	T					
302	BC	C	B	B	C	C	B	C	C	A	B	C	B	C	B	C	C	C	B	C	C	D	S					
	CC	C	C	C	C	C	C	C	C	B	C	C	B	C	C	C	C	C	B	C	C	C	H					
	CC	C	B	C	C	C	B	C	C	A	B	C	C	C	B	C	C	C	B	C	C	C	T					
303	CD	D	C	C	D	E	D	D	C	D	C	C	C	C	C	D	D	D	D	E	E	B	S					
	CD	D	D	D	D	C	D	D	D	D	D	C	D	C	E	D	D	E	B	D	D	C	H					
	CC	B	C	C	C	C	B	B	C	C	C	C	B	C	D	C	C	C	C	C	D	B	T					
304	AB	A	B	A	B	A	B	A	A	B	B	A	B	A	A	B	B	B	A	A	B	C	S					
	BB	A	B	B	B	A	B	A	A	A	B	B	B	B	B	B	B	B	A	B	A	D	H					
	BB	B	B	B	A	A	B	B	B	B	B	A	B	A	B	B	A	A	A	A	A	C	T					
305	CB	BB	C	C	B		B	B	B	B	B	B	C	C	B	B	C	C	B	B	B	C	S					
	CB	BB	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	C	B	B	B	H					
	CB	BB	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	C	B	T					
306	CB	BB	B	B	B	B	B	A	B	B	B	B	B	C	B	B	B	B	C	B	B	A	B	S				
	CB	A	B	C	C	A	A	A	C	B	B	C	B	C	C	B	C	A	B	A	C	H						
	CB	B	B	C	C	C	B	B	B	C	B	B	C	B	C	C	B	C	B	C	C	B	T					
307	BB	B	C	B	B	B	B	A	B	B	C	C	B	B	B	B	B	B	C	B	A	B	S					
	BB	A	B	B	B	A	A	A	A	B	B	B	B	B	B	B	B	B	A	A	A	C	H					
	BB	B	A	A	B	B	B	B	B	B	A	A	A	B	A	A	B	B	A	A	C	T						
308	CB	B	A	B	B	B	B	B	B	A	A	B	C	B	B	B	A	B	B	C	B	C	S					
	BB	B	B	B	B	B	C	B	B	B	B	B	B	C	B	B	B	C	B	C	B	E	H					
	BB	B	B	B	C	B	C	B	A	B	B	B	B	C	B	C	D	C	A	B	B	B	T					
309	CC	B	C	C	C	B	C	B	B	C	C	C	C	C	C	C	C	C	A	B	B	B	S					
	CC	B	C	D	C	C	C	B	B	C	C	C	D	C	D	C	C	C	C	D	C	C	H					
	CC	C	D	D	D	C	C	C	C	D	C	D	D	D	D	D	D	C	B	D	D	B	T					
310	BB	B	B	B	B	B	B	B	B	C	B	B	B	B	C	C	B	B	A	C	B	D	S					
	BB	B	C	B	B	A	B	B	B	C	C	B	B	B	C	C	B	B	A	B	A	C	H					
	BB	B	C	B	B	A	B	B	B	C	C	B	B	B	C	B	B	C	B	A	A	C	T					
311	CB	A	B	B	A	A	A	A	A	B	B	B	B	A	B	A	A	B	A	A	A	D	S					
	BB	B	B	A	B	B	B	B	B	B	A	B	A	A	B	B	A	B	B	B	B	C	H					
	BB	B	B	B	B	B	B	B	B	A	B	B	B	B	B	B	A	B	B	A	B	D	T					
312	BB	A	B	B	B	B	A	A	A	A	B	B	B	B	B	B	A	B	A	C	B	D	S					
	BB	B	B	C	C	B	B	B	B	B	B	B	C	C	C	C	B	C	B	C	B	C	H					
	BB	B	B	C	C	B	B	B	B	B	B	B	C	C	C	C	B	C	B	C	B	D	T					

CASE			COLLEGE 3. GROUP "T"																				
	1st, 2nd	1	2	3	4	5	1a	1b	1c	2a	2b	2c	3a	3b	3c	4a	4b	4c	5a	5b	5c	6	
313	CC	C	C	C	C	B	B	C	C	C	C	C	C	C	C	C	C	C	B	B	B	B	S
	CC	C	C	C	C	B	B	C	C	C	C	C	C	C	C	C	C	C	B	B	C	B	H
	CC	C	C	C	C	B	B	C	C	C	C	C	C	C	C	C	C	C	B	B	B	B	T
314	BB	A	B	B	C	B	B	A	A	A	B	B	B	B	B	C	C	C	B	B	B	D	S
	BC	C	C	C	C	C	C	C	C	C	C	C	C	C	D	C	D	C	D	C	C	B	H
	BC	B	C	C	C	B	B	B	C	C	B	C	C	C	C	C	C	C	C	B	B	D	T
315	BB	B	B	C	B	A	A	B	B	C	B	B	C	C	B	B	B	C	A	A	B	C	S
	AB	B	B	C	C	B	B	B	C	B	B	C	C	B	C	C	C	B	B	B	B	H	
	AB	B	B	B	B	B	A	B	B	B	B	A	B	B	B	A	B	B	B	B	B	T	
316	AC	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	D	S
	CC	C	C	C	C	C	C	C	B	C	C	C	C	C	C	C	C	C	C	C	C	D	H
	BC	C	C	C	C	C	C	C	B	C	C	C	C	C	C	C	C	C	C	C	C	D	T
317	CC	C	C	C	C	C	C	B	C	C	C	C	C	C	C	C	C	C	C	C	C	D	S
	CC	B	C	C	C	B	B	B	C	C	C	C	C	C	C	C	C	C	C	B	B	D	H
	CB	B	C	B	C	B	B	B	C	C	C	B	B	B	C	C	C	B	B	B	C	T	
318	CD	C	D	C	D	C	C	C	D	D	E	C	D	C	D	D	D	C	C	D	C	S	
	CD	D	D	D	C	C	C	D	D	D	D	E	C	D	D	C	D	C	B	D	C	H	
	CD	C	D	D	D	C	C	C	D	D	E	D	D	C	D	D	D	C	C	D	B	T	
																						S	
																						H	
																						T	
																						S	
																						H	
																						T	
																						S	
																						H	
																						T	
																						S	
																						H	
																						T	

STUDENT	MAIN CATEGORIES					SCHOOL CONDITIONS	WEIGHTING OF THE EVALUATION INSTRUMENT BY STUDENTS, HEADS AND TUTORS: <u>STUDENTS</u>																	
							SUB-CATEGORIES																	
	1	2	3	4	5		6	1a	1b	1c	2a	2b	2c	3a	3b	3c	4a	4b	4c	5a	5b	5c		
1	4	5	4	5	3	2	5	3	4	5	4	3	4	3	5	4	5	4	3	4	4			
2	4	5	5	4	4	2	4	3	4	5	4	3	5	4	4	4	4	4	4	4	4			
3	5	5	4	5	4	4	5	3	4	4	5	3	4	5	5	5	5	5	2	4	3			
4	4	5	4	5	3	2	5	2	3	4	5	2	4	4	5	4	5	4	3	5	4			
5	5	5	5	5	5	4	5	3	4	5	4	4	5	5	5	4	5	5	3	4	4			
6	5	4	5	4	3	4	5	3	4	5	4	2	5	3	4	4	4	4	3	3	5			
7	5	5	5	5	4	4	5	3	3	4	4	1	3	3	5	5	4	4	3	4	4			
8	5	4	4	5	4	3	5	3	5	5	5	3	4	5	4	5	5	5	3	4	4			
9	5	5	5	5	4	3	5	5	5	5	5	4	5	5	5	5	5	4	4	5	4			
10	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5			
11	5	5	5	5	5	5	5	4	5	5	5	4	5	5	5	5	5	5	5	5	5			
12	5	5	4	5	4	4	5	4	5	4	5	4	4	4	5	5	4	4	4	5	4			
13	5	5	5	4	4	4	5	3	5	5	5	4	5	4	3	4	5	4	3	4	4			
14	5	5	5	4	4	4	5	3	4	5	4	2	5	3	5	4	4	4	3	4	3			
15	5	4	5	5	4	3	5	3	4	4	5	3	4	4	5	4	5	4	4	4	4			
16	4	4	3	3	3	3	5	3	4	5	4	4	4	5	4	4	4	3	4	4	5			
17	5	4	4	4	3	4	5	3	4	3	3	2	4	4	5	4	5	4	3	3	4			
18	4	4	4	4	4	3	5	4	4	4	5	4	5	4	5	4	5	4	4	4	4			
19	5	4	4	3	4	4	4	4	3	4	4	3	3	4	4	3	4	3	3	3	3			
20	5	5	4	4	4	4	5	4	4	4	5	3	5	4	5	3	4	5	3	4	4			
21	5	5	5	5	4	3	5	3	4	4	5	3	4	3	5	3	5	4	3	4	5			
22	5	3	3	3	5	4	5	4	4	3	4	2	3	3	4	3	4	4	3	3	4			
23	5	4	5	4	3	4	5	3	4	5	4	2	4	4	5	3	5	4	4	4	3			
24	4	5	5	5	3	4	5	1	2	5	5	4	5	4	5	5	5	4	1	4	3			
25	4	5	5	4	4	4	5	3	4	5	5	3	4	4	5	4	5	4	4	4	3			
26	5	4	4	4	4	4	5	3	5	5	4	4	4	4	5	4	5	5	4	4	3			
27	4	5	5	4	3	4	5	4	3	4	5	2	4	4	5	5	4	4	3	4	4			
28	5	5	4	4	4	4	5	4	4	5	5	4	4	4	5	5	4	4	4	4	4			
29	5	5	3	5	3	2	5	4	4	4	5	3	4	5	5	5	5	5	3	4	3			
30	5	5	5	5	5	4	5	4	4	5	5	3	5	3	5	5	5	4	4	4	4			
31	5	4	4	5	4	4	5	3	4	4	5	3	3	3	5	4	5	4	3	4	4			

HEAD - TEACHER	MAIN CATEGORIES					SCHOOLS	WEIGHTING OF THE EVALUATION INSTRUMENT BY STUDENTS, HEADS AND TUTORS: <u>HEAD-TEACHERS</u>															
	1	2	3	4	5		SUB - CATEGORIES															
	1	2	3	4	5		1a	1b	1c	2a	2b	2c	3a	3b	3c	4a	4b	4c	5a	5b	5c	
32	4	4	5	4	5	5	5	3	5	5	5	1	5	5	5	4	5	4	4	5	5	
33	5	4	4	5	5	4	4	5	5	4	4	2	4	4	5	4	5	5	5	5	5	
34	5	5	4	3	3	2	5	4	4	5	4	3	4	3	4	3	4	3	3	3	4	
35	5	4	4	3	4	4	5	3	4	5	3	2	4	3	5	3	5	3	4	4	3	
36	5	5	4	4	5	4	5	4	4	4	4	3	4	4	5	4	4	4	5	4	5	
37	5	3	4	4	5	4	5	4	3	3	3	4	4	3	5	4	5	3	4	5	5	
38	4	4	5	5	4	4	5	4	4	5	4	3	4	4	5	4	5	4	3	4	4	
39	5	5	5	5	4	4	5	4	4	5	4	4	5	4	5	5	4	5	5	4	5	
40	4	4	5	4	4	4	5	4	4	4	4	4	5	4	5	4	4	3	5	4	4	
41	5	5	5	4	4	4	5	3	4	5	4	3	5	4	5	4	4	4	3	5	4	
42	4	5	5	4	4	4	5	3	4	5	4	4	5	4	4	4	5	4	4	3	3	
43	5	4	5	4	5	4	5	5	5	4	4	3	5	4	5	4	5	4	5	5	5	
44	3	5	5	4	4	4	5	3	3	5	5	3	5	3	5	3	4	3	4	5	4	
45	4	5	4	4	4	4	5	3	4	5	4	2	4	3	4	4	5	4	4	4	3	
46	5	4	4	4	3	2	5	2	4	5	4	2	4	4	5	4	5	4	3	3	5	
47	5	4	4	3	3	4	5	3	3	5	3	2	3	3	4	3	3	3	3	4	4	
48	5	4	4	3	3	3	5	4	4	4	4	3	3	3	5	4	4	4	3	3	4	
49	4	3	4	5	4	3	5	3	3	4	4	3	4	3	5	4	4	4	4	4	4	
50	5	3	4	5	4	3	5	3	5	5	3	2	3	3	5	4	5	4	3	5	3	
51	5	5	4	4	3	3	5	3	4	5	4	3	4	3	5	4	4	4	3	4	3	
52	3	4	4	5	3	2	5	2	3	4	4	2	4	3	5	5	4	4	3	4	3	
53	4	5	5	4	4	3	3	3	4	5	4	3	3	3	5	4	3	3	3	4	4	
54	4	5	5	5	4	2	3	3	4	5	4	3	3	3	5	4	4	4	3	4	4	
55	5	4	5	5	4	3	5	4	4	5	4	4	5	4	5	5	5	5	4	5	4	
56	5	5	5	5	5	3	5	3	4	5	5	3	5	4	5	4	5	3	3	4	5	
57	5	4	5	4	3	3	5	3	4	4	3	2	5	3	4	3	5	3	3	4	4	
58	3	3	4	5	4	4	3	3	3	4	3	3	4	4	4	5	5	5	3	4	4	
59	5	4	4	4	5	3	5	5	5	4	4	3	4	3	4	4	5	4	5	5	5	
60	4	5	5	4	4	4	5	4	3	5	4	2	4	3	5	4	4	4	4	4	4	
61	5	5	5	4	4	3	5	4	4	5	4	4	5	4	5	5	5	4	4	4	5	
62	4	4	4	4	5	4	5	3	4	5	4	3	4	3	5	4	4	5	5	4	5	

COLLEGE TUTOR	MAIN CATEGORIES					SCHOOL CONDITIONS	WEIGHTING OF THE EVALUATION INSTRUMENT BY STUDENTS, HEADS AND TUTORS : <u>COLLEGE TUTORS</u>														
	1	2	3	4	5		SUB-CATEGORIES														
	1	2	3	4	5		1a	1b	1c	2a	2b	2c	3a	3b	3c	4a	4b	4c	5a	5b	5c
63	5	5	5	5	5	5	5	4	3	5	4	3	3	4	5	3	4	5	3	5	4
64	2	1	4	3	5	3	5	3	4	5	5	3	4	3	4	5	5	4	3	3	4
65	5	4	4	3	2	3	5	3	3	4	4	3	4	3	5	5	5	2	2	4	3
66	3	5	4	5	3	3	5	2	3	5	5	3	4	3	4	5	5	5	3	3	3
67	5	4	4	4	4	4	5	4	4	4	4	3	4	2	5	3	5	3	3	4	5
68	5	4	4	4	3	2	5	3	4	4	5	2	4	3	5	4	4	4	3	3	4
69	5	5	5	5	5	4	5	4	4	5	5	4	5	4	5	5	5	5	3	4	5
70	5	4	4	4	3	2	5	3	4	5	3	4	4	3	5	4	4	4	3	4	4
71	5	5	5	5	4	3	5	3	4	4	5	3	4	3	5	4	5	3	3	4	4
72	4	4	4	5	4	3	5	3	3	5	3	3	4	3	5	4	5	4	3	4	4
73	5	4	4	4	4	3	5	5	4	4	4	3	3	3	4	3	5	4	3	4	4
74	5	4	4	4	3	3	5	4	4	5	4	3	4	3	4	4	4	4	4	4	4
75	4	4	5	3	5	3	4	4	4	5	4	3	3	4	5	5	4	3	4	4	3
76	5	4	5	4	3	4	5	3	3	4	4	4	5	4	5	5	4	4	3	4	3
77	5	5	5	5	4	3	5	4	4	5	4	5	4	5	5	4	5	4	5	5	5
78	4	5	4	5	3	3	5	3	3	5	5	3	4	4	5	5	5	5	4	4	3
79	3	4	3	4	2	5	4	3	3	3	4	4	3	4	4	4	5	4	2	2	2
80	4	3	4	4	3	3	5	3	3	3	4	2	4	3	5	4	4	4	2	3	3
81	5	5	5	5	5	4	5	4	5	5	5	4	5	4	5	5	5	5	4	5	4
82	5	3	5	4	5	2	5	4	5	5	4	2	5	4	5	4	5	3	5	5	3
83	5	5	4	4	4	4	5	4	5	5	4	4	4	4	4	5	4	4	4	5	4
84	5	3	4	5	4	3	5	3	4	4	4	3	3	4	5	4	5	4	4	3	4
85	4	4	4	4	4	3	5	3	3	5	5	3	5	3	4	4	4	4	3	4	4
86	5	5	4	4	5	3	5	4	4	5	4	2	5	4	4	4	5	4	5	4	4
87	5	5	4	5	5	2	5	3	5	5	5	1	3	3	5	5	5	5	5	5	5
88	5	4	4	4	3	4	5	4	4	5	5	3	4	3	4	5	4	3	3	3	5
89	5	4	4	4	4	5	5	4	4	4	4	3	4	3	5	4	5	4	3	5	5
90	5	4	4	4	3	3	5	5	5	4	4	4	4	3	5	4	4	4	4	3	3
91	4	5	5	5	4	4	5	4	4	5	5	4	5	4	5	5	5	5	5	4	4
92	4	5	5	4	4	3	5	3	4	5	5	5	5	5	5	4	4	5	5	4	4
93	5	4	4	5	3	5	5	4	3	4	5	2	4	4	5	5	4	5	2	3	3

STUDENT.	WEIGHTING OF EVALUATION INSTRUMENT BY STUDENTS, HEADS/TEACHERS, & TUTORS :														
	<u>STUDENTS</u>														
	SUB-CATEGORIES.														
	1a.	1b.	1c.	2a.	2b.	2c.	3a.	3b.	3c.	4a.	4b.	4c.	5a.	5b.	5c.
1.	4	3	4	5	4	3	5	4	4	4	4	4	4	4	4
2.	5	5	5	5	5	4	5	5	5	5	5	4	4	5	4
3.	5	3	4	5	4	3	4	3	5	4	5	4	3	4	4
4.	5	3	4	5	4	2	5	3	5	4	4	4	3	4	3
5.	5	3	4	4	5	3	4	4	5	4	5	4	4	4	4
6.	5	4	4	4	5	4	5	4	5	4	5	4	4	4	4
7.	5	4	4	4	5	3	5	4	5	3	4	5	3	4	4
8.	5	3	4	4	5	3	4	3	5	3	5	4	3	4	5
9.	5	4	4	3	4	2	3	3	4	3	4	4	3	3	4
10.	5	3	3	4	4	2	3	3	5	5	4	4	3	4	4
11.	5	3	4	4	5	3	4	5	5	5	5	5	2	4	3
12.	5	3	4	3	3	2	4	4	5	4	5	4	3	3	4
13.	5	1	2	5	5	4	5	4	5	5	5	4	1	4	3
14.	5	3	4	5	4	3	4	3	5	4	5	4	3	4	4
15.	5	3	4	5	5	3	4	4	5	4	5	4	4	4	3
16.	5	3	4	5	4	2	4	4	5	3	5	4	4	4	3
17.	5	4	4	5	5	4	4	4	5	5	4	4	4	4	4
18.	5	3	4	5	4	2	5	3	4	4	4	4	3	3	5
19.	5	4	4	5	5	3	5	3	5	5	5	4	4	4	4
20.	5	4	4	4	5	4	5	4	5	4	5	4	4	4	4
21.	5	3	4	4	5	3	3	3	5	4	5	4	3	4	4
22.	5	5	5	5	5	4	5	5	5	5	5	4	4	5	4
23.	5	4	5	4	5	4	4	4	5	5	4	4	4	5	4
24.	5	2	3	4	5	2	4	4	5	4	5	4	3	5	4
25.	5	3	4	5	4	4	4	5	4	4	4	3	4	4	5
26.	5	4	4	5	5	3	5	3	5	5	5	4	4	4	4
27.	5	4	5	5	5	4	5	5	5	5	5	5	5	5	5
28.	5	3	4	4	5	3	3	3	5	4	5	4	3	4	4
29.	5	4	5	5	5	4	5	5	5	5	5	5	5	5	5
30.	5	3	4	5	4	2	4	4	5	3	5	4	4	4	3
31.	5	4	4	4	5	3	4	5	5	5	5	5	3	4	3
32.	5	5	5	5	5	4	5	5	5	5	5	4	4	5	4
33.	5	3	4	3	3	2	4	4	5	4	5	4	3	3	4
34.	5	3	5	5	5	4	5	4	3	4	5	4	3	4	4
35.	5	3	4	5	5	3	4	4	5	4	5	4	4	4	3
36.	4	3	4	5	4	3	5	4	4	4	4	4	4	4	4
37.	5	3	5	5	4	4	4	4	5	4	5	5	4	4	3
38.	4	4	3	4	4	3	3	4	4	3	4	3	3	3	3
39.	5	3	5	5	5	3	4	5	4	5	5	5	3	4	4
40.	5	3	3	4	4	1	3	3	5	5	4	4	3	4	4

STUDENT	WEIGHTING OF EVALUATION INSTRUMENT BY STUDENTS, HEADS/TEACHERS, & TUTORS: <u>STUDENTS.</u>															
	1a.	1b.	1c.	2a.	2b.	2c.	3a.	3b.	3c.	4a.	4b.	4c.	5a.	5b.	5c.	
81.	5	2	3	4	5	2	4	4	5	4	5	4	3	5	4	
82.	5	3	4	4	5	3	4	4	5	4	5	4	4	4	4	
83.	5	3	4	5	4	2	5	3	4	4	4	4	3	3	5	
84.	5	3	4	5	4	4	4	5	4	4	4	3	4	4	5	
85.	5	3	4	3	3	2	4	4	5	4	5	4	3	3	4	
86.	4	4	3	4	4	3	3	4	4	3	4	3	3	3	3	
87.	4	3	4	5	4	3	5	4	4	4	4	4	4	4	4	
88.	5	4	4	4	5	3	5	4	5	3	4	5	3	4	4	
89.	5	4	4	3	4	2	3	3	4	3	4	4	3	3	4	
90.	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	
91.	5	3	4	5	4	2	4	4	5	3	5	4	4	4	3	
92.	5	4	5	4	5	4	4	4	5	5	4	4	4	5	4	
93.	5	3	4	4	5	3	4	3	5	3	5	4	3	4	5	
94.	5	4	4	5	5	4	4	4	5	5	4	4	4	4	4	
95.	5	3	4	5	4	2	5	3	5	4	4	4	3	4	3	
96.	5	4	4	4	5	3	4	3	5	5	5	5	3	4	3	
97.	5	2	3	4	5	2	4	4	5	4	5	4	3	5	4	
98.	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	
99.	5	4	4	5	5	3	5	3	5	5	5	4	4	4	4	
100.	5	3	5	5	5	3	4	5	4	5	5	5	3	4	4	
101.	5	3	4	4	5	3	3	3	5	4	5	4	3	4	4	
102.	5	2	2	5	5	4	5	4	5	5	5	4	2	4	3	
103.	5	3	4	4	5	3	4	5	5	5	5	5	2	4	3	
104.	4	3	4	5	4	3	5	4	4	4	4	4	4	4	4	
105.	5	4	4	4	5	4	5	4	5	4	5	4	4	4	4	
106.	5	4	3	4	5	2	4	4	5	5	4	4	3	4	4	
107.	5	4	4	3	4	2	3	3	4	3	4	4	3	3	4	
108.	5	3	5	5	4	4	4	4	5	4	5	5	4	4	3	
109.	5	4	5	4	5	4	4	4	5	5	4	4	4	5	4	
110.	5	3	3	4	4	1	3	3	5	5	4	4	3	4	4	
111.	5	3	4	5	4	3	4	3	5	4	5	4	3	4	4	
112.	5	3	5	5	5	3	4	5	4	5	5	5	3	4	4	
113.	5	3	4	5	5	3	4	4	5	4	5	4	4	4	3	
114.	5	3	5	5	5	4	5	4	3	4	5	4	3	4	4	
115.	5	4	4	4	5	3	5	4	5	3	4	5	3	4	4	
116.	5	2	3	4	5	2	4	4	5	4	5	4	3	5	4	
117.	5	3	5	5	5	3	4	5	4	5	5	5	3	4	4	
118.	5	3	4	4	5	3	4	3	5	3	5	4	3	4	3	
119.	5	5	5	5	5	5	5	5	5	5	5	5	4	4	4	
120.	5	3	4	5	4	2	5	3	4	4	4	4	3	3	5	

HEADS/TEACHER	WEIGHTING OF EVALUATION INSTRUMENT BY STUDENTS, HEADS/TEACHERS, & TUTORS:														
	<u>HEADS/TEACHERS</u>														
	SUB - CATEGORIES														
	1a.	1b.	1c.	2a.	2b.	2c.	3a.	3b.	3c.	4a.	4b.	4c.	5a.	5b.	5c.
121.	5	3	4	5	4	3	4	3	5	4	4	5	5	4	5
122.	5	5	5	4	4	3	4	3	4	4	5	4	5	5	5
123.	5	4	4	5	4	4	5	4	5	5	5	5	4	5	4
124.	3	3	4	5	4	3	3	3	5	4	4	4	3	4	4
125.	5	3	4	4	3	2	5	3	4	3	5	3	3	4	4
126.	3	3	4	5	4	3	3	3	5	4	3	3	3	4	4
127.	5	4	4	5	4	4	5	4	5	5	5	4	4	5	5
128.	5	3	3	4	4	3	4	3	5	4	4	4	4	4	4
129.	5	4	4	4	4	3	3	3	5	4	4	4	3	3	4
130.	5	3	3	5	3	3	3	3	4	3	3	3	3	4	4
131.	5	2	4	5	4	2	4	4	5	4	5	4	3	3	5
132.	5	2	3	4	4	2	4	3	5	5	4	4	3	4	3
133.	5	3	4	5	4	2	4	3	4	4	5	4	4	4	3
134.	5	3	3	5	5	3	5	3	5	3	4	3	4	5	4
135.	5	5	5	4	4	3	5	4	5	4	5	4	5	5	5
136.	5	3	4	5	4	3	5	4	5	4	4	4	3	5	4
137.	5	4	4	4	4	4	5	4	5	4	4	3	5	4	4
138.	5	3	4	5	4	3	4	3	5	4	4	4	3	4	3
139.	5	4	4	5	4	4	5	4	5	5	4	5	5	4	5
140.	5	4	4	5	4	3	4	4	5	4	5	4	3	4	4
141.	5	4	4	4	4	3	4	4	5	4	4	4	5	4	5
142.	3	3	3	4	3	3	4	4	4	5	5	5	3	4	4
143.	5	3	4	5	4	3	4	3	5	4	4	5	5	4	5
144.	5	3	4	5	5	3	5	4	5	4	5	3	3	4	5
145.	5	4	4	5	4	5	5	4	5	5	5	5	4	5	4
146.	5	2	3	4	4	2	4	3	5	5	4	4	3	4	3
147.	5	3	5	5	3	2	3	3	5	4	5	4	3	5	3
148.	5	4	3	3	3	4	4	3	5	4	5	3	4	5	5
149.	5	3	5	5	5	2	5	5	5	4	5	4	4	5	5
150.	4	5	5	4	4	2	4	4	5	4	5	5	5	5	5
151.	5	4	4	5	4	3	4	3	4	3	4	3	3	3	4
152.	5	3	4	5	3	2	4	3	5	3	5	3	4	4	3
153.	5	4	4	5	4	3	4	4	5	4	5	4	3	4	3
154.	5	3	3	4	4	3	4	3	5	4	4	4	4	4	4
155.	5	4	3	5	4	2	4	3	5	4	4	4	4	4	4
156.	5	3	4	5	4	4	5	4	4	4	5	4	4	3	3
157.	5	5	5	4	4	3	5	5	5	4	5	4	5	5	5
158.	5	3	4	5	4	2	4	3	4	4	5	4	4	4	4
159.	5	3	3	5	3	2	3	3	4	3	3	3	3	4	4
160.	5	3	4	5	5	3	5	4	5	4	5	3	3	4	4

HEADS/TEACHERS	WEIGHTING OF EVALUATION INSTRUMENT BY STUDENTS, HEADS/TEACHERS, & TUTORS:															
	<u>HEADS/TEACHERS</u>															
	SUB - CATEGORIES.															
	1a.	1b.	1c.	2a.	2b.	2c.	3a.	3b.	3c.	4a.	4b.	4c.	5a.	5b.	5c.	
161.	5	4	3	5	4	2	4	3	5	4	4	4	4	4	4	
162.	5	4	4	5	4	4	5	4	3	5	5	4	4	5	5	
163.	5	5	5	4	4	3	4	3	4	4	5	4	5	5	5	
164.	5	3	4	4	3	2	5	3	4	3	5	3	3	4	4	
165.	5	3	4	5	5	3	5	4	5	4	5	3	3	4	5	
166.	5	4	4	5	4	4	5	4	5	5	5	5	4	5	4	
167.	3	3	4	5	4	3	4	3	5	4	3	3	3	4	4	
168.	5	2	3	4	4	2	4	3	5	4	4	4	3	4	4	
169.	5	3	4	5	4	3	4	3	5	4	4	4	3	4	3	
170.	5	3	5	5	3	2	3	3	5	4	5	4	3	5	3	
171.	5	4	4	4	4	3	3	3	5	4	4	4	3	3	4	
172.	5	2	4	5	4	2	4	4	5	4	5	4	3	3	5	
173.	5	3	4	5	4	2	4	3	4	4	5	4	4	4	3	
174.	5	3	3	5	5	3	5	3	5	3	4	3	4	5	4	
175.	5	5	5	4	4	3	5	4	5	4	5	4	5	5	5	
176.	5	3	4	5	4	4	5	4	4	4	5	4	4	3	3	
177.	5	3	4	5	4	3	5	4	5	4	4	4	3	5	4	
178.	5	4	4	5	4	4	5	4	3	5	5	4	4	5	5	
179.	5	4	4	4	4	4	5	4	5	4	4	3	5	4	4	
180.	5	4	4	5	4	4	5	4	5	5	4	5	5	4	5	
181.	3	3	4	5	4	3	3	3	5	4	4	4	3	4	4	
182.	5	4	3	3	3	4	4	3	5	4	5	3	4	5	5	
183.	5	3	5	5	5	2	5	5	5	4	5	4	4	5	5	
184.	4	5	5	4	4	2	4	4	5	4	5	5	5	5	5	
185.	5	4	4	5	4	3	4	3	4	3	4	3	3	3	4	
186.	5	5	5	4	4	3	4	3	4	4	5	4	5	5	4	
187.	5	4	4	5	4	4	5	4	5	5	5	5	4	5	4	
188.	5	3	5	5	3	3	3	3	5	4	5	4	3	5	3	
189.	5	4	4	5	4	3	4	4	5	4	5	4	3	4	4	
190.	5	4	4	4	4	3	4	4	5	4	4	4	5	4	5	
191.	5	4	4	5	4	3	4	3	4	3	4	3	3	3	4	
192.	5	3	4	5	3	2	4	3	5	3	5	3	4	4	3	
193.	5	4	4	5	3	2	4	3	5	3	5	3	4	4	3	
194.	5	4	5	5	5	2	5	5	5	4	5	4	4	5	5	
195.	5	4	5	4	4	3	4	4	5	4	4	4	5	4	5	
196.	3	3	3	4	3	3	4	4	4	5	5	5	4	4	4	
197.	5	3	3	4	4	3	4	3	5	4	4	4	4	4	4	
198.	5	3	3	5	3	2	3	3	4	3	3	3	3	4	4	
199.	5	3	4	5	4	3	4	3	5	4	4	5	5	4	5	
200.	5	3	4	4	3	2	5	3	4	3	5	3	3	4	4	

HEADS / TEACHERS.	WEIGHTING OF EVALUATION INSTRUMENT BY STUDENTS. HEADS/TEACHERS, & TUTORS: <u>HEADS / TEACHERS</u>															
	SUB- CATEGORIES .															
	1a.	1b.	1c.	2a.	2b.	2c.	3a.	3b.	3c.	4a.	4b.	4c.	5a.	5b.	5c.	
201.	5	4	4	5	4	4	5	4	5	5	5	4	4	4	5	
202.	3	3	3	4	3	3	4	4	4	5	5	5	3	4	4	
203.	5	3	4	4	3	2	5	3	4	3	5	3	3	4	4	
204.	3	3	4	5	4	3	3	3	5	4	4	4	3	4	4	
205.	5	3	4	5	4	3	4	3	5	4	4	4	3	4	3	
206.	3	3	4	5	4	3	3	3	5	4	3	3	3	4	4	
207.	5	3	4	5	4	3	4	3	5	4	4	5	5	4	5	
208.	5	3	5	5	3	2	3	3	5	4	5	4	3	5	3	
209.	5	2	4	5	4	2	4	4	5	4	5	4	3	3	5	
210.	5	3	3	5	5	3	5	3	5	3	4	3	4	5	4	
211.	5	5	5	4	4	3	5	4	5	4	5	4	5	5	5	
212.	5	3	4	5	4	4	5	4	4	4	5	4	4	3	3	
213.	5	3	4	5	4	3	5	4	5	4	4	4	3	5	4	
214.	5	4	4	4	4	4	5	4	5	4	4	3	5	4	4	
215.	4	5	5	4	4	3	4	4	5	4	5	5	5	5	5	
216.	5	5	5	4	4	3	4	3	4	4	5	4	5	5	5	
217.	5	4	4	5	4	3	3	3	5	4	4	4	3	3	4	
218.	5	4	4	5	4	4	5	4	5	5	4	5	5	4	5	
219.	5	4	3	3	3	4	4	3	5	4	5	3	4	5	5	
220.	5	4	4	4	4	3	4	4	5	4	4	4	5	4	5	
221.	5	3	5	5	5	2	5	5	5	4	5	4	4	5	5	
222.	5	3	4	5	5	3	5	4	5	4	5	3	3	4	5	
223.	4	3	4	5	4	3	3	3	5	4	4	4	3	4	4	
224.	5	4	3	5	4	2	4	3	5	4	4	4	4	4	3	
225.	5	4	4	5	4	3	4	4	5	4	5	4	3	4	4	
226.	5	4	3	3	3	4	4	4	5	4	5	3	4	5	5	
227.	4	5	5	4	4	2	4	4	5	4	5	5	5	5	5	
228.	5	4	4	5	4	3	4	3	4	3	4	3	3	3	4	
229.	5	3	4	5	3	2	4	3	5	3	5	3	4	4	3	
230.	5	4	4	4	4	4	5	4	5	5	4	3	5	4	5	
231.	3	3	4	5	4	3	3	3	5	4	3	3	3	4	4	
232.	5	3	3	4	4	3	4	3	5	4	4	4	4	4	4	
233.	5	4	5	4	4	4	5	4	5	4	4	3	5	4	4	
234.	5	4	4	5	4	4	5	4	4	4	5	4	4	3	3	
235.	3	3	4	4	3	3	4	4	4	5	5	5	3	4	4	
236.	5	3	4	5	4	4	4	3	5	4	4	4	3	4	3	
237.	5	4	4	4	4	3	3	3	5	4	4	4	3	3	4	
238.	5	3	4	5	4	2	4	3	4	4	5	4	4	4	3	
239.	5	2	4	5	4	2	4	4	5	4	5	4	3	3	5	
240.	5	4	3	5	4	2	4	3	5	4	4	4	4	4	4	

COLLEGE TUTOR	WEIGHTING OF EVALUATION INSTRUMENT BY STUDENTS, HEADS/TEACHERS, & TUTORS: <u>COLLEGE TUTORS</u>																
	SUB-CATEGORIES																
	1a.	1b.	1c.	2a.	2b.	2c.	3a.	3b.	3c.	4a.	4b.	4c.	5a.	5b.	5c.		
241.	5	3	3	4	4	3	4	3	5	5	5	2	2	4	3		
242.	5	4	4	5	5	4	5	4	5	5	5	5	3	4	5		
243.	5	3	4	5	3	4	4	3	5	4	4	4	3	4	4		
244.	5	3	3	5	3	3	4	3	5	4	5	4	3	4	4		
245.	5	5	4	4	4	3	3	3	4	3	5	4	3	4	4		
246.	5	4	3	5	4	3	3	4	5	3	4	5	3	5	4		
247.	4	4	4	5	4	3	3	4	5	5	4	3	4	4	3		
248.	5	3	3	4	4	4	5	4	5	5	4	4	3	4	3		
249.	5	4	4	5	5	5	4	5	5	4	5	4	5	5	5		
250.	4	3	3	3	4	4	3	4	4	4	5	4	2	2	2		
251.	5	3	3	3	4	2	4	3	5	4	4	4	2	3	3		
252.	5	4	4	5	4	3	4	3	4	4	4	4	4	4	4		
253.	5	4	5	5	5	4	5	4	5	5	5	5	4	5	4		
254.	5	4	5	5	4	2	5	4	5	4	5	3	5	5	3		
255.	5	4	5	5	4	4	4	4	4	5	4	4	4	5	4		
256.	5	3	4	4	4	3	3	4	5	4	5	4	4	3	4		
257.	5	3	4	4	5	2	4	3	5	4	4	4	3	3	4		
258.	5	3	4	4	5	3	4	3	5	4	5	3	3	4	4		
259.	5	3	4	4	4	3	3	4	5	4	5	4	4	3	4		
260.	5	4	4	5	4	2	5	4	4	4	5	4	5	4	4		
261.	5	4	4	5	5	4	5	4	5	5	5	5	5	4	4		
262.	5	3	3	5	5	3	4	4	5	5	5	5	4	4	3		
263.	5	4	3	4	5	2	4	4	5	5	4	5	2	3	3		
264.	5	4	4	5	5	3	4	3	4	5	4	3	3	3	5		
265.	5	3	4	5	5	5	5	5	5	4	4	5	5	4	4		
266.	5	3	4	5	5	3	4	3	4	5	5	4	3	3	4		
267.	5	4	3	5	4	3	3	4	5	3	4	5	3	5	4		
268.	5	2	3	5	5	3	4	3	4	5	5	5	3	3	3		
269.	5	3	4	4	5	2	4	3	5	4	4	4	3	3	3		
270.	5	3	3	5	3	4	4	3	5	4	4	4	3	4	4		
271.	5	5	5	4	4	3	3	3	4	3	5	4	3	4	4		
272.	5	3	3	5	5	3	5	3	4	4	4	4	3	4	4		
273.	5	3	5	5	5	2	3	3	5	5	5	5	5	5	5		
274.	5	4	4	4	4	3	4	3	5	4	5	4	3	5	5		
275.	5	5	5	4	4	4	4	3	5	4	4	4	4	3	3		
276.	5	4	4	4	4	3	4	2	5	3	5	3	3	4	5		
277.	4	4	5	5	4	3	3	4	5	5	4	3	4	4	3		
278.	5	4	4	5	4	5	4	5	5	4	5	4	5	5	5		
279.	5	3	5	5	5	2	3	3	5	5	5	5	5	5	5		
280.	5	5	5	4	4	4	4	3	5	4	4	4	4	3	3		

COLLEGE TUTOR	WEIGHTING OF EVALUATION INSTRUMENT BY STUDENTS, HEADS/TEACHERS, & TUTORS!																
	<u>COLLEGE TUTORS</u>																
	SUB - CATEGORIES																
	1a.	1b.	1c.	2a.	2b.	2c.	3a.	3b.	3c.	4a.	4b.	4c.	5a.	5b.	5c.		
281.	5	3	3	4	3	4	3	5	5	5	2	2	4	3			
282.	5	4	3	5	4	3	3	4	5	3	4	5	3	5	4		
283.	5	2	3	5	5	3	4	3	4	5	5	5	3	3	3		
284.	5	4	4	4	4	3	4	2	5	3	5	3	3	4	5		
285.	5	4	4	5	5	4	5	4	5	5	5	5	3	4	5		
286.	5	5	4	4	4	3	3	3	4	3	5	4	3	4	4		
287.	5	3	3	3	4	2	4	3	5	4	4	4	2	3	3		
288.	5	4	5	5	4	2	5	4	5	4	5	3	5	5	3		
289.	5	4	5	5	4	4	4	4	4	5	4	4	4	5	4		
290.	5	4	4	5	4	2	5	4	4	4	5	4	5	4	4		
291.	5	3	4	5	5	3	4	3	4	5	5	4	3	3	4		
292.	5	3	4	4	4	3	4	3	5	5	5	2	2	4	3		
293.	5	3	4	4	5	3	4	3	5	4	5	3	3	4	4		
294.	5	3	3	5	3	3	4	3	5	4	5	4	3	4	4		
295.	5	3	3	5	5	3	5	3	4	4	4	4	3	4	4		
296.	5	5	5	4	4	4	4	3	5	4	4	4	4	3	3		
297.	5	3	4	5	5	5	5	5	5	4	4	5	5	4	4		
298.	4	4	4	5	4	3	3	4	5	5	4	3	4	4	3		
299.	5	3	3	5	5	3	4	4	5	5	5	5	4	4	3		
300.	5	4	4	5	4	2	5	4	4	4	5	4	5	4	4		
301.	5	4	4	4	4	3	4	3	5	4	5	4	3	5	5		
302.	5	4	4	5	5	3	4	3	4	5	4	3	3	3	5		
303.	5	3	5	5	5	2	3	3	5	5	5	5	5	5	5		
304.	5	4	4	4	4	3	4	3	5	4	5	4	3	5	5		
305.	5	4	3	4	5	2	4	4	5	5	4	5	2	3	3		
306.	5	3	4	4	5	2	4	3	5	4	4	4	3	3	4		
307.	5	3	4	5	3	4	4	3	5	4	4	4	3	4	4		
308.	5	4	5	5	4	2	5	4	5	4	5	3	5	5	3		
309.	5	4	4	5	5	3	4	3	4	5	4	3	3	3	5		
310.	5	4	4	5	5	4	5	4	5	5	5	5	5	4	4		
311.	5	4	4	5	4	3	4	3	4	4	4	4	4	4	4		
312.	5	4	4	5	4	5	4	5	5	4	5	4	5	5	5		
313.	5	3	3	4	4	2	4	3	5	4	4	4	2	3	3		
314.	5	4	5	5	5	4	5	4	5	5	5	5	4	5	4		
315.	5	3	3	5	5	3	5	3	4	4	4	4	3	4	4		
316.	5	4	3	4	4	3	4	2	5	3	5	3	3	4	5		
317.	5	3	4	4	5	3	4	3	5	4	5	3	3	4	4		
318.	5	3	3	4	4	4	5	4	5	5	4	4	3	4	3		
319.	5	3	3	5	5	3	4	4	5	5	5	5	4	4	4		
320.	4	3	3	3	4	4	3	4	4	4	5	4	2	2	2		

COLLEGE TUTOR	WEIGHTING OF EVALUATION INSTRUMENT BY STUDENTS, HEADS/TEACHERS, & TUTORS; <u>COLLEGE TUTORS</u>															
	SUB-CATEGORIES															
	1a.	1b.	1c.	2a.	2b.	2c.	3a.	3b.	3c.	4a.	4b.	4c.	5a.	5b.	5c.	
321.	5	2	3	5	5	3	4	3	4	5	5	5	3	3	3	
322.	5	4	4	4	4	3	4	2	5	3	5	3	3	4	5	
323.	5	3	4	5	3	4	4	3	5	4	4	4	3	4	4	
324.	5	3	3	5	3	3	4	3	5	4	5	4	3	4	4	
325.	5	4	4	5	4	3	4	3	4	4	4	4	4	4	4	
326.	5	3	4	5	5	3	4	3	4	5	5	4	3	3	4	
327.	5	3	3	4	4	3	4	3	5	5	5	2	2	4	3	
328.	5	3	3	4	4	4	5	4	5	5	4	4	3	4	3	
329.	4	3	3	3	4	4	3	4	4	4	5	4	2	2	2	
330.	5	4	5	5	4	4	4	4	4	5	4	4	4	5	4	
331.	5	3	4	5	5	4	4	3	4	5	5	4	3	3	4	
332.	5	3	4	4	5	2	4	3	5	4	4	4	3	3	4	
333.	5	4	4	5	5	4	5	4	5	5	5	5	3	4	5	
334.	5	3	3	3	4	2	4	3	5	4	4	4	2	3	3	
335.	5	4	5	5	5	4	5	4	5	5	5	5	4	5	4	
336.	5	3	4	4	4	3	3	4	5	4	5	4	4	3	4	
337.	5	3	5	5	5	2	3	3	5	5	5	5	5	5	5	
338.	5	4	4	5	5	4	5	4	5	5	5	5	5	4	4	
339.	5	4	4	5	5	3	4	3	4	5	4	3	3	3	5	
340.	5	4	3	4	5	2	4	4	5	5	4	5	2	3	3	
341.	5	4	4	4	4	3	4	3	5	4	5	4	3	5	5	
342.	5	4	4	5	5	4	5	4	5	5	5	5	5	4	4	
343.	5	5	5	4	4	4	4	3	5	4	4	4	4	3	3	
344.	5	4	5	5	5	4	5	4	5	5	5	5	5	5	4	
345.	5	4	4	5	4	2	5	4	4	4	5	4	5	4	4	
346.	4	4	4	5	4	3	3	4	5	5	4	3	4	4	3	
347.	5	4	4	5	4	5	4	5	5	4	5	4	5	5	5	
348.	5	3	3	5	5	3	4	4	5	5	5	5	4	4	3	
349.	5	3	3	5	5	3	5	3	4	4	4	4	3	4	4	
350.	5	3	4	5	5	5	5	5	5	4	4	5	5	4	4	
351.	5	4	3	4	5	2	4	4	5	5	4	5	2	3	3	
352.	5	4	4	5	5	4	5	4	5	4	5	5	3	4	5	
353.	5	3	4	4	5	3	4	3	5	4	5	3	3	4	4	
354.	5	5	4	4	4	3	3	3	4	3	5	4	3	4	4	
355.	5	4	5	5	4	4	4	4	4	5	4	4	4	5	3	
356.	5	4	3	5	4	3	3	4	5	3	4	5	3	5	4	
357.	5	3	3	5	5	3	4	3	4	5	5	5	3	3	3	
358.	5	4	5	5	4	2	5	4	5	4	5	3	5	5	3	
359.	5	3	4	4	4	3	3	4	5	4	5	3	4	3	4	
360.	5	3	4	5	5	5	5	5	5	4	5	5	5	4	4	

(b) STATISTICAL ANALYSIS

GLOBAL INTUITIVE (1st) ASSESSMENTS

Consider the situations in groups "C", "E" and "T",

taking into account the number of agreements between:

- (a) students, heads and tutors
- (b) students and heads
- (c) students and tutors
- (d) heads and tutors

(See Tables 1, 7 and 13)

Take the null hypothesis H_0 to be that there is no difference between the numbers of agreements in situations "C", "E" and "T" on the 1st assessments.

Use a Kruskal-Wallis one-way analysis of variance by ranks:

$$H \left[\frac{12}{N(N+1)} \sum_{j=1}^k \left(\frac{R_j^2}{n_j} \right) \right] - 3(N+1)$$

Where necessary apply a correction factor H for ties:

$$H_c = \frac{H}{1 - \frac{\sum_i (t_i^3 - t_i)}{N^3 - N}}$$

College 1. $H_c = 0.92338539$ with d.f. = $k-1 = 2$

College 2. $H_c = 3.77984$ with d.f. = $k-1 = 2$

College 3. $H_c = 1.109999953$ with d.f. = $k-1 = 2$

From χ^2 tables these values of H are not significant at the 5% level, and so H_0 cannot be rejected and any differences between "C", "E" and "T" situations on the (1st) intuitive assessments are due to chance.

2nd ASSESSMENTS

Consider the situations in groups "C" (global, intuitive, second assessments), and "E" and "T" (overall grades from the Evaluation Instrument):

Take the null hypothesis H_0 to be that there is no difference between the numbers of agreements in situations "C", "E" and "T" on the 2nd assessment. Use a Kruskal-Wallis one-way analysis of variance by ranks:

College 1. $H = 6.8173$ with 2 d.f. (significant at the 5% level)

College 2. $H = 9.84615$ with 2 d.f. (significant at the 1% level)

College 3. $H = 9.8461538$ with 2 d.f. (significant at the 1% level)

From χ^2 tables these values of H are significant, and so H_0 can be rejected. There are significant differences between "C", "E" and "T" situations on the 2nd assessments.

PREDICT A TREND from the tabulated results, and so test the hypothesis (H_1) that there is a trend in the order "T" > "C" > "E" for College 1 and "T" > "E" > "C" for Colleges 2 and 3. Take the null hypothesis (H_0) to be that there is random ordering.

A non-parametric test is required, so use a Jonckheere Trend Test, developed from Kendall's S statistic (see Biometrika No. 41. 1954 pp. 133 - 145)

$$Z = \frac{2 \sum p - \sum n_i n_j}{\sqrt{\frac{1}{18} [N^2(2N+3) - \sum (2n^3 - 3n^2)]}}$$

$$S = 2P - \text{MAX } P.$$

College 1. $S = 32$ ($p = 0.01$) Trend: $T > C > E$

College 2. $S = 48$ ($p = 0.001$) Trend: $T > E > C$

College 3. $S = 48$ ($p = 0.001$) Trend: $T > E > C$

From the tables which follow, it can be seen that these values are significant, and that there is a trend in the data for College 1 $T > C > E$; and for Colleges 2 and 3, $T > E > C$, so we can reject H_0 which is random ordering and accept H_1 which is the trend.

To check that this trend does not appear on the 1st intuitive assessments, a Jonckheere Trend Test is used again:

College 1. $S = 6$

College 2. $S = -20$

College 3. $S = -14$

These values are not significant at the 5% level and so H_0 cannot be rejected (i.e. there is no significant trend, and so we can accept random ordering on the 1st intuitive assessment).

CONSIDER THE NUMBERS OF AGREEMENTS BETWEEN SITUATIONS "E" AND "T"

Use a Kruskal-Wallis one-way analysis of variance by ranks.

The hypothesis to be considered is that there is no difference between the situation using an evaluation instrument "E", and the situation using an evaluation instrument with video-tape training "T", when the numbers of agreements of grades are considered. This hypothesis being the null hypothesis H_0 . The working hypothesis H_1 is that there is a difference between the two situations "E" and "T" when the numbers of agreements of grades are considered.

Consider the Main Categories on the Evaluation Instrument
for significant increased agreement:

(See Tables 2, 8 and 14)

- (a) Taking together: (Student/Head agreements
 (Student/Tutor agreements
 (Head/Tutor agreements

College 1. $H = 10.068387$ (significant at the 0.5% level)

College 2. $H_c = 3.8362$ (not significant at the 5% level)

College 3. $H = 7.8387$ (significant at the 1% level)

- (b) Taking: Student/Head/Tutor agreements

College 1. $H_c = 4.5569$ (significant at 5% level)

College 2. $H_c = 1.8893$ (not significant at 5% level)

College 3. $H = 4.8109$ (significant at 5% level)

Consider Sub-Categories:

- (a) Taking: Student/Head/Tutor agreements

(See Tables 3, 9 and 15)

College 1. $H = 9.3815696$ (significant at 0.5% level)

College 2. $H = 8.64204$ (significant at 0.5% level)

College 3. $H = 13.0909$ (significant at 0.1% level)

- (b) Taking: Student/Head agreements

(See Tables 4, 10 and 16)

College 1. $H = 7.773$ (significant at 1% level)

College 2. $H = 7.2617$ (significant at 1% level)

College 3. $H = 12.6850$ (significant at 0.1% level)

(c) Taking: Student/Tutor agreements

(See Tables 5, 11 and 17)

College 1. $H_c = 3.18703637$ (not significant at 5% level)

College 2. $H = 11.50568$ (significant at 0.1% level)

College 3. $H = 11.0$ (significant at 0.1% level)

(d) Taking: Head/Tutor agreements

(See Tables 6, 12 and 18)

College 1. $H = 8.8650568$ (significant at 0.5% level)

College 2. $H_c = 1.6566$ (not significant at 5% level)

College 3. $H = 10.3838$ (significant at 0.5% level)

(e) Taking together { Student/Head agreements
Student/Tutor agreements
Head/Tutor agreements

College 1. $H = 18.6592701$ (Highly significant)

College 2. $H = 24.935$ (Highly significant)

College 3. $H = 27.9899$ (Highly significant)

JONCKHEERE TREND TEST.

TABLES SHOWING MINIMUM VALUES OF S AT EACH PROBABILITY LEVEL.

PROBABILITY LEVEL 0.05									
NUMBER OF SAMPLES	NUMBER PER SAMPLE								
	2	3	4	5	6	7	8	9	10
3	10	17	24	33	42	53	64	76	88
4	14	26	38	51	66	82	100	118	138
5	20	34	51	71	92	115	140	166	194
6	26	44	67	93	121	151	184	219	256

PROBABILITY LEVEL 0.02									
NUMBER OF SAMPLES	NUMBER PER SAMPLE								
	2	3	4	5	6	7	8	9	10
3	12	21	30	41	52	65	79	94	110
4	18	30	46	63	82	102	124	147	172
5	24	42	64	88	114	143	174	207	242
6	32	55	83	115	150	189	230	273	320

PROBABILITY LEVEL 0.01									
NUMBER OF SAMPLES	NUMBER PER SAMPLE								
	2	3	4	5	6	7	8	9	10
3	-	23	32	45	59	74	90	106	124
4	20	34	50	71	92	115	140	167	195
5	26	48	72	99	129	162	197	234	274
6	34	62	94	130	170	213	260	309	361

PROBABILITY LEVEL 0.001									
NUMBER OF SAMPLES	NUMBER PER SAMPLE								
	2	3	4	5	6	7	8	9	10
3	-	27	42	57	78	98	119	141	165
4	24	42	66	94	122	153	186	221	258
5	34	60	95	131	171	215	262	311	364
6	44	82	124	172	225	283	345	411	480

(c) COMPUTERISED RESULTS

TABLE 19 (COLLEGE 2)

PRODUCT-MOMENT CORRELATION COEFFICIENTS CONCERNING 1ST (INTUITIVE) & 2ND (OVERALL) GRADES, AND MAIN CATEGORY GRADES, INDICATING GROUPS 'E' & 'T' FOR STUDENTS/HEADS, STUDENTS/TUTORS, & HEADS/TUTORS.

	GROUP	1ST. ASSESSMENT (INTUITIVE)	2ND ASSESSMENT (OVERALL)	MAIN CATEGORIES					CONSIDERING DIFFERENCE BETWEEN PRODUCT-MOMENT CORRELATION COEFFICIENTS FOR GROUPS 'E' & 'T' IN OVERALL GRADES :
				1.	2.	3.	4.	5.	
STUDENTS/ HEADS	"E"	0.2292	0.1570	-0.0286	0.3360	0.3392	0.1841	-0.2466	STUDENTS/HEADS : $Z = 4.801 \quad p < .001$
	"T"	0.1610	0.8551	0.6832	0.5867	0.4962	0.3649	0.4781	
STUDENTS/ TUTORS	"E"	0.5129	0.0805	0.2604	0.4050	0.2707	0.0561	-0.1977	STUDENTS/TUTORS : $Z = 5.868 \quad p < .001$
	"T"	0.2668	0.8947	0.5603	0.6455	0.5722	0.5369	0.4475	
HEADS/ TUTORS	"E"	0.4804	0.4031	0.5044	0.6835	0.6091	0.6376	0.5660	HEADS/TUTORS : $Z = 6.8 \quad p < .001$
	"T"	0.6134	0.9647	0.7113	0.7410	0.6373	0.7095	0.5470	

		1a	1b	1c	2a	2b	2c	3a	3b	3c	4a
STUDENTS/ HEADS	"E"	0.0302	0.0749	0.1862	0.4290	0.2920	0.1934	0.1483	0.2315	0.4193	0.4190
	"T"	0.3199	0.6510	0.7185	0.4518	0.6287	0.6974	0.4930	0.3618	0.7484	0.5699
STUDENTS/ TUTORS	"E"	-0.1677	0.3466	0.4407	0.4660	0.0909	0.3402	0.2968	0.1735	0.0987	0.2776
	"T"	0.5361	0.4683	0.6022	0.6155	0.6741	0.6447	0.3678	0.5103	0.7588	0.5879
HEADS/ TUTORS	"E"	0.6240	0.5960	0.3185	0.7845	0.3966	0.6189	0.4373	0.6091	0.6177	0.6424
	"T"	0.6745	0.7272	0.6382	0.6111	0.6962	0.7935	0.5222	0.6254	0.6954	0.7380
		4b	4c	5a	5b	5c	6	TABLE. 20 (COLLEGE 2.)			
STUDENTS/ HEADS	"E"	-0.0462	0.2842	-0.0607	-0.1890	0.0307	0.2028				
	"T"	0.5131	0.3165	0.4120	0.4038	0.6435	0.3744	PRODUCT-MOMENT CORRELATION COEFFICIENTS CONCERNING SUB -CATEGORY GRADES -			
STUDENTS/ TUTORS	"E"	-0.0745	-0.0845	0.0232	0.1223	-0.1231	0.4850	FOR: STUDENTS/HEADS } IN GROUPS STUDENTS/TUTORS } 'E' & 'T' HEADS/TUTORS }			
	"T"	0.5994	0.3774	0.2638	0.3607	0.6140	0.2310				
HEADS/ TUTORS	"E"	0.5063	0.6329	0.4254	0.5114	0.4829	0.4040				
	"T"	0.6393	0.6039	0.4179	0.5710	0.6913	0.4175				

TABLE 21 (COLLEGE 3.)

PRODUCT - MOMENT CORRELATION CO-EFFICIENTS CONCERNING 1ST.(INTUITIVE) & 2ND.(OVERALL) GRADES, AND MAIN CATEGORY GRADES, INDICATING GROUPS 'E' & 'T' FOR STUDENTS/HEADS, STUDENTS/TUTORS, & HEADS/TUTORS.

	GROUP	1ST. ASSESSMENT (INTUITIVE)	2ND. ASSESSMENT (OVERALL)	MAIN CATEGORIES					CONSIDERING DIFFERENCE BETWEEN PRODUCT - MOMENT CORRELATION CO-EFFICIENTS FOR GROUPS 'E' & 'T' IN OVERALL GRADES:
				1.	2.	3.	4.	5.	
STUDENTS/ HEADS	"E"	0.29067	0.36149	0.18010	0.41494	0.40813	0.36906	0.06802	STUDENTS/HEADS $Z = 3.7968 \quad p < .001$
	"T"	0.35729	0.52160	0.71162	0.53015	0.61512	0.46584	0.47198	
STUDENTS/ TUTORS	"E"	0.49573	0.13083	0.28467	0.34249	0.30315	0.23702	-0.12449	STUDENTS/TUTORS $Z = 5.075 \quad p < .001$
	"T"	0.40464	0.82709	0.60058	0.65173	0.63242	0.63892	0.51937	
HEADS/ TUTORS	"E"	0.53399	0.43358	0.55099	0.63571	0.61784	0.62636	0.51928	HEADS/TUTORS $Z = 6.671 \quad p < .001$
	"T"	0.67079	0.95087	0.67093	0.70170	0.68527	0.73005	0.58134	

		1a	1b	1c	2a	2b	2c	3a	3b	3c	4a
STUDENTS/ HEADS	"E"	0.20939	0.18798	0.37137	0.44011	0.29901	0.19337	0.34752	0.26201	0.46575	0.50542
	"T"	0.32560	0.69830	0.72947	0.54912	0.60373	0.64735	0.56454	0.41487	0.75704	0.62469
STUDENTS/ TUTORS	"E"	0.05314	0.23131	0.45518	0.38579	0.23351	0.28165	0.23285	0.20460	0.19731	0.35355
	"T"	0.58523	0.50892	0.57802	0.58925	0.60532	0.58736	0.45697	0.48394	0.76323	0.62616
HEADS/ TUTORS	"E"	0.59816	0.58297	0.38483	0.68750	0.42914	0.54681	0.44449	0.53018	0.61552	0.64496
	"T"	0.59067	0.68831	0.64310	0.70962	0.71215	0.64765	0.61350	0.62766	0.76883	0.73994
		4b	4c	5a	5b	5c	6	<p><u>TABLE 22 (COLLEGE 3.)</u></p> <p>PRODUCT-MOMENT CORRELATION CO-EFFICIENTS CONCERNING SUB- CATEGORIES (GRADES) FOR:</p> <p>STUDENTS/HEADS } IN GROUPS STUDENTS/TUTORS } 'E' & 'T' HEADS/TUTORS }</p>			
STUDENTS/ HEADS	"E"	0.00722	0.40557	0.16523	0.03546	0.28408	0.28964				
	"T"	0.56121	0.33653	0.44480	0.45508	0.60758	0.40943				
STUDENTS/ TUTORS	"E"	-0.00072	0.13564	0.12532	0.20024	-0.00720	0.55759				
	"T"	0.60958	0.33796	0.33798	0.45945	0.56771	0.21213				
HEADS/ TUTORS	"E"	0.46665	0.58378	0.43567	0.53165	0.47349	0.47235				
	"T"	0.67065	0.58644	0.51351	0.61675	0.63486	0.37137				

SUB-CATEGORIES	FACTOR ANALYSIS : "E" GROUP - STUDENTS						"T" GROUP - STUDENTS				
	GENERAL FACTOR (PRINCIPAL COMPONENTS)	VARIMAX		ROTATIONS			GENERAL FACTOR (PRINCIPAL COMPONENTS)	VARIMAX		ROTATIONS	
		1	2	3	4			5	1	2	3
1a	-0.6331	-0.4277	-0.4836	-0.0206	-0.1455	-0.4859	-0.6677	-0.3498	0.4230	0.3908	
1b	-0.4209	-0.0617	-0.8207	0.2064	0.1652	-0.1634	-0.6840	-0.2606	0.0994	0.8297	
1c	-0.3623	0.1145	-0.8942	0.1118	-0.2167	-0.0236	-0.7592	-0.3637	0.1642	0.7867	
2a	-0.6396	-0.0071	-0.0857	0.7353	-0.4092	-0.1568	-0.6672	-0.3224	0.6752	0.1777	
2b	-0.7846	-0.1739	-0.1615	0.6812	-0.5192	-0.2090	-0.8204	-0.3749	0.5883	0.4750	
2c	-0.4957	-0.1779	-0.0367	0.1356	-0.9047	-0.0227	-0.7113	-0.2698	0.7647	0.2278	
3a	-0.5698	-0.2351	-0.3750	0.5994	0.1625	-0.1051	-0.6101	-0.7294	0.2661	0.0205	
3b	-0.5542	-0.0421	-0.0121	0.6478	-0.0757	-0.3408	-0.7505	-0.7715	0.1093	0.3738	
3c	-0.6921	-0.6336	0.0954	0.2678	-0.5184	-0.1210	-0.8176	-0.5121	0.1966	0.6952	
4a	-0.5562	-0.3574	-0.1054	0.6834	-0.0318	0.1487	-0.8121	-0.7454	0.4084	0.2242	
4b	-0.6411	-0.1948	-0.2742	0.1417	-0.1249	-0.7739	-0.7374	-0.6443	0.2749	0.3318	
4c	-0.6106	-0.7643	0.0082	0.1087	-0.1765	-0.1693	-0.6821	-0.8419	0.1196	0.1618	
5a	-0.5943	-0.7744	0.1012	0.2274	-0.6983	-0.0932	-0.6342	0.0079	0.7424	0.4193	
5b	-0.6061	-0.7222	-0.2617	0.0536	0.0638	-0.2737	-0.5129	-0.1966	0.7399	0.0193	
5c	-0.5675	-0.2167	0.0240	0.1936	0.0222	-0.8414	-0.5194	0.0296	0.3008	0.7176	
% OF VARIANCE	34.8407	17.5890	13.7483	16.8017	11.4258	12.7692	49.0254	24.9891	21.1314	21.8086	

SUB-CATEGORIES	FACTOR ANALYSIS : "E" GROUP - HEADS			SUB-CATEGORIES	"T" GROUP - HEAD-TEACHERS		
	GENERAL FACTOR (PRINCIPAL COMPONENTS)	VARIMAX ROTATIONS			GENERAL FACTOR (PRINCIPAL COMPONENTS)	VARIMAX ROTATIONS	
		1	2			1	2
1a	0.8359	0.6603	-0.5234	1a	-0.8388	-0.5254	-0.6805
1b	0.7525	0.4119	-0.7726	1b	-0.8724	-0.6809	-0.5455
1c	0.7868	0.5307	-0.6372	1c	-0.8819	-0.6720	-0.5712
2a	0.8004	0.6709	-0.4373	2a	-0.8097	-0.6459	-0.4895
2b	0.8906	0.8690	-0.2843	2b	-0.8292	-0.8200	-0.3101
2c	0.8411	0.7066	-0.4570	2c	-0.8582	-0.6470	-0.5641
3a	0.8618	0.7803	-0.3752	3a	-0.8112	-0.8867	-0.2014
3b	0.8967	0.8509	-0.3259	3b	-0.8187	-0.8699	-0.2334
3c	0.8208	0.8552	-0.1724	3c	-0.8922	-0.6263	-0.6425
4a	0.7316	0.8761	-0.3516	4a	-0.8946	-0.7154	-0.5387
4b	0.8219	0.7915	-0.2795	4b	-0.9114	-0.6774	-0.6108
4c	0.8401	0.8843	-0.1615	4c	-0.8333	-0.8087	-0.3301
5a	0.3904	-0.0198	-0.7866	5a	-0.6518	-0.0916	-0.9109
5b	0.5560	0.5971	-0.0372	5b	-0.6802	-0.2941	-0.7112
5c	0.6680	0.3127	-0.7734	5c	-0.8494	-0.5012	-0.7264
% OF VARIANCE	62.6823	48.3903	23.6861	% OF VARIANCE	69.2038	44.0365	32.5621

SUB - CATEGORIES	FACTOR ANALYSIS : "E" GROUP - TUTORS				"T" GROUP - TUTORS.		
	GENERAL FACTOR (PRINCIPAL COMPONENTS)	VARIMAX ROTATIONS			GENERAL FACTOR (PRINCIPAL COMPONENTS)	VARIMAX ROTATIONS	
		1	2	3		1	2
1a	0.7787	0.3133	0.7070	0.3016	0.8766	0.6859	-0.5621
1b	0.7049	0.1962	0.3149	0.5238	0.8400	0.7908	-0.3134
1c	0.6982	0.2707	0.2000	0.8632	0.7957	0.7651	-0.2698
2a	0.6968	0.8443	-0.0224	0.3911	0.7792	0.7566	-0.2517
2b	0.7287	0.7290	0.4197	0.0234	0.8806	0.8641	-0.2692
2c	0.7500	0.8192	0.2756	0.1408	0.7255	0.7393	-0.1755
3a	0.8725	0.6906	0.5528	0.2041	0.8147	0.8416	-0.1778
3b	0.8394	0.7870	0.3827	0.2318	0.7205	0.7769	-0.1024
3c	0.8391	0.4305	0.6719	0.3210	0.8418	0.5269	-0.7620
4a	0.8743	0.5059	0.5786	0.4202	0.8506	0.6994	-0.4882
4b	0.8407	0.4310	0.6991	0.2876	0.8556	0.8022	-0.3244
4c	0.7729	0.3565	0.7825	0.1309	0.8310	0.7731	-0.4235
5a	0.3462	-0.2878	0.4611	0.5084	0.4695	0.6686	-0.8049
5b	0.6411	0.0860	0.7883	0.2027	0.6383	0.2365	-0.8536
5c	0.7208	0.4455	0.2010	0.6769	0.7898	0.6116	-0.5171
% OF VARIANCE	56.3931	28.4297	27.3684	19.4714	62.6099	48.6759	22.9560

PHASE 2. PILOT STUDY: CORRELATION COEFFICIENTS (STUDENTS).

	1a	1b	1c	2a	2b	2c	3a	3b	3c	4a	4b	4c	5a	5b	5c
1a	1.0000	-.0486	.2012	-.0069	.2748	.0285	.1011	.0000	.3851	.2703	.3541	.3411	-.0375	.2599	.1654
1b	-.0486	1.0000	.5113	-.0883	.1935	.2732	.0712	.2288	.0081	.1466	-.1801	.1440	.6108	.2021	.2609
1c	.2012	.5113	1.0000	.2652	.1187	.4630	.2591	.3231	-.1598	.1168	.2285	.4179	.6235	.3425	.2970
2a	-.0069	-.0883	.2652	1.0000	.1219	.4432	.5573	-.2189	-.1170	.2685	.1449	.1077	.2782	.3427	.0370
2b	.2748	.1935	.1187	.1219	1.0000	.4074	.2041	.2427	.1890	.4068	.2900	.2739	.0759	.5857	.0673
2c	.0285	.2732	.4630	.4432	.4074	1.0000	.4433	.5532	-.0161	.2727	.3069	.2314	.3584	.4637	.1857
3a	.1011	.0712	.2591	.5573	.2041	.4433	1.0000	.2679	.0061	.2179	.1849	.3110	.1768	.3347	.2085
3b	.0000	.2288	.3231	.2189	.2427	.5532	.2679	1.0000	.0000	.3820	.2815	.4205	.2273	.4174	.0000
3c	.3851	.0081	-.1598	-.1170	.1890	-.0161	.0061	.0000	1.0000	.2537	.2880	.3043	.0885	.3862	-.1767
4a	.2703	.1466	.1168	.2685	.4068	.2727	.2179	.3820	.2537	1.0000	.1419	.3122	.0747	.4910	.0484
4b	.3541	-.1801	.2285	.1449	.2900	.3069	.1849	.2815	.2880	.1419	1.0000	.3951	.0220	.2952	-.1121
4c	.3411	.1440	.4179	.1077	.2739	.2314	.3110	.4205	.3043	.3122	.3951	1.0000	.0518	.3152	-.0396
5a	-.0375	.6108	.6235	.2782	.0759	.3584	.1768	.2273	.0885	.0747	.0220	.0518	1.0000	.4260	.3928
5b	.2599	.2021	.3425	.3427	.5857	.4637	.3347	.4174	.3862	.4910	.2952	.3152	.4260	1.0000	.1964
5c	.1654	.2609	.2970	.0370	.0673	.1857	.2085	.0000	-.1767	.0484	-.1121	-.0396	.3928	.1964	1.0000

PHASE 2 PILOT STUDY.

SUB-CATEGORIES (CRITERIA)	FACTOR ANALYSIS : (CRITERIA) STUDENTS.					
	GENERAL FACTOR (PRINCIPAL COMPONENTS)	VARIMAX ROTATIONS :				
		1.	2.	3.	4.	5
1a	0.3427	0.3065	0.0215	0.0510	0.6037	0.5596
1b	0.4207	0.1884	-0.8446	0.1903	-0.0956	-0.1316
1c	0.6527	-0.0964	-0.7684	-0.2804	0.4052	-0.0229
2a	0.4850	0.1282	-0.0059	-0.8449	0.0048	-0.0402
2b	0.5725	0.7296	-0.0781	-0.1405	0.1279	-0.0287
2c	0.7321	0.2944	-0.3762	-0.5713	0.1678	-0.3016
3a	0.5607	0.1549	-0.0875	-0.7507	0.1784	0.0745
3b	0.6264	0.2861	-0.2886	-0.2845	0.2896	-0.6121
3c	0.2474	0.5810	0.0857	0.3638	0.3605	0.1455
4a	0.5560	0.7342	-0.0301	-0.1813	0.0797	-0.1014
4b	0.4465	0.1400	0.1062	-0.1842	0.7654	-0.0647
4c	0.5730	0.2029	-0.1705	-0.0642	0.7545	-0.1808
5a	0.5504	0.1178	-0.8306	-0.1658	-0.0394	0.0641
5b	0.7791	0.7440	-0.2591	-0.2926	0.1788	0.0242
5c	0.2783	0.0192	-0.5149	-0.2511	-0.1472	0.5861
% OF VARIANCE	29.4096	15.9008	17.5341	14.6759	13.6312	8.1411

PHASE 2. PILOT STUDY : CORRELATION COEFFICIENTS (TUTORS)

	1a	1b	1c	2a	2b	2c	3a	3b	3c	4a	4b	4c	5a	5b	5c
1a	1.0000	.0191	.1315	.2346	.1558	-.1007	.4179	-.1909	.1213	-.0726	.0429	.1953	.1343	.3053	.4589
1b	-.0191	1.0000	.4839	.0536	-.1650	.1241	-.0070	.0894	-.0069	-.2636	-.0857	-.0702	.2451	.2904	.2372
1c	.1315	.4839	1.0000	.2907	.0617	.0435	.0943	.0416	.0576	.0455	.0873	-.0425	.6259	.3999	.3854
2a	.2346	.0536	.2907	1.0000	.1729	.1343	.3067	.2546	-.1233	.2879	.0137	.2702	.5986	.5172	.3939
2b	.1558	-.1650	.0617	.1729	1.0000	-.1083	.2652	.1071	-.0958	.4579	.0670	.3757	.0956	-.1343	.1249
2c	-.1007	.1241	.0435	.1343	-.1083	1.0000	.2553	.4617	.0363	.0220	-.0668	.1288	.1382	.0697	.0384
3a	.4179	-.0070	.0943	.3067	.2652	.2553	1.0000	.2150	.0617	.2520	-.0158	.1188	.2565	.1982	.0833
3b	-.1909	.0894	.0416	.2546	.1071	.4617	.2150	1.0000	.1756	.2143	-.0285	.3808	.4742	.2213	-.1530
3c	.1213	-.0069	.0576	-.1233	-.0958	.0363	.0617	.1756	1.0000	-.0107	.0325	.0543	.1018	.2862	.0509
4a	-.0726	-.2636	.0455	.2879	.4579	.0220	.2520	.2143	-.0107	1.0000	.0197	.1559	.0617	-.0668	-.1566
4b	.0429	-.0857	.0873	.0137	.0670	-.0668	-.0158	-.0285	.0325	.0197	1.0000	-.0139	.1583	.1466	.1624
4c	.1953	-.0702	-.0425	.2702	.3757	.1288	.1188	.3808	.0543	.1559	-.0139	1.0000	.2260	.0653	.0733
5a	.1343	.2451	.6259	.5986	.0956	.1382	.2565	.4742	.1018	.0617	.1583	.2260	1.0000	.5026	.2857
5b	.3053	.2904	.3999	.5172	-.1343	.0697	.1982	.2213	.2862	-.0668	.1466	.0653	.5026	1.0000	.4616
5c	.4589	.2372	.3854	.3939	.1249	.0384	.0833	-.1530	.0509	-.1566	.1624	.0733	.2857	.4616	1.0000

PHASE 2. PILOT STUDY.

SUB-CATEGORIES (CRITERIA)	FACTOR ANALYSIS: (CRITERIA) TUTORS.					
	GENERAL FACTOR (PRINCIPAL COMPONENTS)	VARIMAX ROTATIONS:				
		1.	2.	3.	4.	5.
1a	-0.4288	-0.0954	0.0487	-0.1231	0.8895	-0.0942
1b	-0.3393	-0.5672	-0.4565	0.1654	-0.0019	0.2399
1c	-0.6269	-0.8278	-0.0461	-0.0700	0.0089	0.0603
2a	-0.7409	-0.6044	0.3989	0.1780	0.2702	0.0594
2b	-0.2316	-0.0236	0.7716	-0.1138	0.1743	0.1428
2c	-0.2616	-0.0815	-0.0685	0.7547	0.0004	0.0303
3a	-0.4731	-0.0732	0.3234	0.3819	0.5543	0.0234
3b	-0.4286	-0.2248	0.2890	0.7527	-0.2408	-0.2612
3c	-0.1719	0.0560	-0.1564	0.1802	0.1444	-0.7825
4a	-0.1661	-0.0057	0.7659	0.0665	-0.1299	0.0356
4b	-0.1465	-0.2224	0.1915	-0.4170	-0.1481	-0.5175
4c	-0.3541	-0.0300	0.4871	0.3257	0.2090	-0.1241
5a	-0.8122	-0.7987	0.2159	0.2419	0.0125	-0.1924
5b	-0.7224	-0.6394	-0.1200	0.1177	0.3197	-0.4027
5c	-0.5724	-0.5326	-0.0788	-0.2277	0.5521	-0.0440
% OF VARIANCE	23.2240	18.8560	14.0829	12.0998	11.8027	8.4102

PHASE 2. PILOT STUDY: CORRELATION COEFFICIENTS (HEADS)

	1a	1b	1c	2a	2b	2c	3a	3b	3c	4a	4b	4c	5a	5b	5c
1a	1.0000	.0817	.0471	.0281	.1326	-.0090	.4114	.0367	.0533	-.1872	.1872	-.1534	.2296	.0109	.0095
1b	.0817	1.0000	.4075	-.3562	.0286	.3490	.1414	.1696	.0165	.0752	.1864	-.1818	.6024	.3230	.4576
1c	.0471	.4075	1.0000	.1163	.1777	-.1580	.1045	.3690	.0684	.0000	.4165	.2167	.2996	-.2762	.2396
2a	.0281	-.3562	.1163	1.0000	.3145	-.1484	.0274	.0845	.0408	-.1034	-.1512	.0402	-.2752	-.1933	-.2490
2b	.1326	.0286	.1777	.3145	1.0000	.0410	.4029	.3747	.3381	.1072	-.0640	.0566	.1786	.0470	.2934
2c	-.0090	.3490	-.1580	-.1484	.0410	1.0000	.3023	.1066	.0877	.3707	-.0509	.0865	.2591	-.0801	.1635
3a	.4114	.1414	.1045	.0274	.4029	.3023	1.0000	.5903	.0396	.1642	.4019	.0547	.3744	.2254	.2601
3b	.0367	.1696	.3690	.0845	.3747	.1066	.5903	1.0000	.1909	.4053	.3962	.3434	.2463	.1450	.4443
3c	.0533	.0165	.0684	.0408	.3381	.0877	.0396	.1909	1.0000	.2717	-.1054	.1283	.1384	.2619	.2273
4a	-.1872	.0752	.0000	-.1034	.1072	.3707	.1642	.4053	.2717	1.0000	.1851	.6889	.1435	.0906	.1572
4b	.1872	.1864	.4165	-.1512	-.0640	-.0509	.4019	.3962	-.1054	.1851	1.0000	.2237	.1435	.2298	.1267
4c	-.1534	.1818	.2167	.0402	.0566	.0865	.0547	.3434	.1283	.6889	.2237	1.0000	.3150	.1283	.1790
5a	.2296	.6024	.2996	-.2752	.1786	.2591	.3744	.2463	.1384	.1435	.1435	.3150	1.0000	.3333	.4584
5b	.0109	.3230	.2762	-.1933	.0470	-.0801	.2254	.1450	.2619	.0906	.2298	.1283	.3333	1.0000	.2273
5c	.0095	.4576	.2396	-.2490	.2934	.1635	.2601	.4443	.2273	.1572	.1267	.1790	.4584	.2273	1.0000

PHASE 2. PILOT STUDY.

SUB-CATEGORIES (CRITERIA)	FACTOR ANALYSIS : (CRITERIA) HEADS.					
	GENERAL FACTOR (PRINCIPAL COMPONENTS)	VARIMAX ROTATIONS :				
		1.	2.	3.	4.	5.
1a	-0.1831	-0.0797	0.0025	-0.3823	0.0181	0.6469
1b	-0.6146	-0.8393	-0.0513	0.0568	-0.0718	0.0848
1c	-0.5027	-0.2917	0.0814	0.1382	-0.7504	0.1616
2a	0.1932	0.6301	0.4085	-0.006	-0.2180	0.1375
2b	-0.3916	0.0295	0.7689	0.0307	-0.0620	0.3748
2c	-0.3289	-0.3291	0.0231	0.2759	0.6944	0.2273
3a	-0.6206	-0.1583	0.1327	0.1289	0.0625	0.8815
3b	-0.7071	-0.1074	0.2668	0.5222	-0.2403	0.5493
3c	-0.3147	-0.1742	0.7139	0.1521	0.0053	-0.1135
4a	-0.4823	-0.0795	0.1001	0.8943	0.2056	0.0296
4b	-0.4773	-0.1353	-0.4151	0.3226	-0.4628	0.5123
4c	-0.4977	-0.1270	0.0432	0.8283	-0.1442	-0.0456
5a	-0.7052	-0.7518	0.1339	0.0980	-0.0193	0.2673
5b	-0.4634	-0.5156	0.1325	0.0486	-0.4051	-0.0163
5c	-0.6522	-0.6169	0.3400	0.1541	-0.0653	0.1558
% OF VARIANCE	25.2826	17.4762	11.3448	14.5579	10.7317	14.1059

PHASE 2. MAIN STUDY : CORRELATION COEFFICIENTS
(STUDENTS & TEACHERS & TUTORS)

	1a	1b	1c	2a	2b	2c	3a	3b	3c	4a	4b	4c	5a	5b	5c
1a.	1.00000	.04361	-.05669	.03525	.21715	.02674	.26827	.01102	-.10193	-.01461	.21328	.04602	.06896	.06881	.07159
1b	.04361	1.00000	.44527	-.12034	.01091	.25390	.07593	.13417	.01493	.02951	-.00303	.06142	.44986	.26209	.25555
1c	-.05669	.44527	1.00000	.19176	.09705	.17587	.14251	.26024	-.03860	.06022	.22850	.13825	.49037	.32822	.24609
2a	.03525	-.12034	.19176	1.00000	.15965	.19094	.28683	.15988	-.09012	.17086	-.01408	.14547	.22528	.22230	.04533
2b	.21715	.01091	.09705	.15965	1.00000	.19912	.25346	.28727	.09692	.38250	.14191	.29855	.01002	.04016	.04968
2c	.02674	.25390	.17587	.19094	.19912	1.00000	.31457	.42153	.01035	.27555	.08858	.18079	.25502	.17318	.11390
3a	.26827	.07593	.14251	.28683	.25346	.31457	1.00000	.35405	-.01660	.19114	.21115	.12648	.26379	.23299	.16393
3b	.01102	.13417	.26024	.15988	.28727	.42153	.35405	1.00000	.07937	.30832	.23957	.36656	.28332	.25318	.06324
3c	.10193	.01493	-.03860	-.09012	.09692	.01035	-.01660	.07937	1.00000	.10655	.03198	.11637	.09554	.25226	-.01410
4a	-.01461	.02951	.06022	.17086	.38250	.27555	.19114	.30832	.10655	1.00000	.11825	.34895	.07438	.11948	-.02644
4b	.21328	-.00303	.22850	-.01408	.14191	.08858	.21115	.23957	.03198	.11825	1.00000	.19840	.09314	.21284	.03661
4c	.04602	.06142	.13825	.14547	.29855	.18079	.12648	.36656	.11637	.34895	.19840	1.00000	.15897	.11561	.03158
5a	.06896	.44986	.49037	.22528	.01002	.25502	.26379	.28332	.09554	.07438	.09314	.15897	1.00000	.44141	.36309
5b	.06881	.26209	.32822	.22230	.04016	.17318	.23299	.25318	.25226	.11948	.21284	.11561	.44141	1.00000	.32093
5c	.07159	.25555	.24609	.04533	.04968	.11390	.16393	.06324	-.01410	-.02644	.03661	.03158	.36309	.32093	1.00000

PHASE 2 : MAIN STUDY.

SUB - CATEGORIES (CRITERIA)	FACTOR ANALYSIS : (CRITERIA) { STUDENTS, TEACHERS & TUTORS.					
	PRINCIPAL FACTOR	VARIMAX ROTATIONS				
		1.	2.	3.	4.	5.
1a	.19549	.03700	-.00111	.61013	-.01315	.04965
1b	.43936	.69613	.09773	-.01442	-.30485	-.07752
1c	.54199	.60732	.15251	.06934	.06611	-.02575
2a	.34307	.09595	.18819	.01873	.62441	-.07100
2b	.36171	-.05477	.50864	.29331	.04088	.02082
2c	.49169	.27955	.45187	.04456	.12101	-.11523
3a	.51311	.20423	.29409	.43056	.34027	-.09759
3b	.58907	.23945	.59849	.08739	.13379	.03941
3c	.13389	.00948	.10596	.06825	-.09832	.50825
4a	.38037	-.03538	.61760	-.00359	.07958	.09825
4b	.30333	.10518	.20528	.31732	.01411	.12201
4c	.39637	.05659	.52760	.04940	.02882	.14066
5a	.64905	.72731	.12035	.03535	.19374	.10608
5b	.57016	.51625	.09078	.09458	.27412	.45973
5c	.33601	.43573	-.04042	.10819	.08622	.05541
% OF VARIANCE		49.2	22.1	10.5	10.0	8.2

PHASE 2. MAIN STUDY: CORRELATION COEFFICIENTS (STUDENTS).

	1a	1b	1c	2a	2b	2c	3a	3b	3c	4a	4b	4c	5a	5b	5c
1a	1.00000	-.02049	.17013	-.02537	.25661	.03274	.04617	-.01434	.36323	-.23996	.33918	.29508	-.05603	.21552	.12321
1b	-.02049	1.00000	.50202	-.06026	.23247	.32322	.10403	.21191	.09521	-.21306	-.15333	.14886	.56640	.18828	.20781
1c	.17013	.50202	1.00000	.24377	.11131	.44281	.22987	.32166	-.18374	.10092	.19682	.40094	.58448	.29774	.24939
2a	-.02537	-.06026	.24377	1.00000	.14300	.43843	.55927	.23338	-.11235	.27609	.12276	.09954	.29896	.32058	.01372
2b	.25661	.23247	.11131	.14300	1.00000	.42040	.19251	.20398	.17127	.41537	.28664	.24173	.09951	.57836	.01523
2c	.03274	.32322	.44281	.43843	.42040	1.00000	.42610	.55320	-.00709	.30573	.27386	.22638	.37981	.44223	.13409
3a	.04617	.10403	.22987	.55927	.19251	.42610	1.00000	.26463	-.01802	.22029	.18846	.26930	.18840	.29077	.16287
3b	-.01434	.21191	.32166	.23338	.20398	.55320	.26463	1.00000	-.02928	.33489	.24757	.37759	.23917	.39862	.02583
3c	.36323	.09521	-.18374	-.11235	.17127	-.00709	-.01802	-.02928	1.00000	.24748	.28019	.27588	.10543	.36862	-.23732
4a	.23996	.21306	.10092	.27609	.41537	.30573	.22029	.33489	.24748	1.00000	.10439	.29458	.10189	.46400	.05131
4b	.33918	-.15333	.19682	.12276	.28664	.27386	.18846	.24757	.28019	.10439	1.00000	.39606	.00362	.26850	-.17807
4c	.29508	.14886	.40094	.09954	.24173	.22638	.26930	.37759	.27588	.29458	.39606	1.00000	.02266	.26046	-.11190
5a	-.05603	.56640	.58448	.29896	.09951	.37981	.18840	.23917	.10543	.10189	.00362	.02266	1.00000	.41226	.32120
5b	.21552	.18828	.29774	.32058	.57836	.44223	.29077	.39862	.36862	.46400	.26850	.26046	.41226	1.00000	.11350
5c	.12321	.20781	.24939	.01372	.01523	.13409	.16287	.02583	-.23732	.05131	-.17807	-.11190	.32120	.11350	1.00000

PHASE 2: MAIN STUDY.

SUB-CATEGORIES (CRITERIA)	FACTOR ANALYSIS : (CRITERIA) STUDENTS.					
	PRINCIPAL FACTOR	VARIMAX ROTATIONS				
		1.	2.	3.	4.	5.
1a	.26233	.05099	.30532	-.03303	.58189	-.27453
1b	.45942	.69760	.23088	-.18376	-.08816	.30534
1c	.65774	.75292	-.15027	.21786	.43526	.28406
2a	.47704	.07296	.09922	.77372	-.00024	.06492
2b	.51687	.07537	.56203	.16972	.15548	.14766
2c	.72079	.29200	.28184	.48745	.08335	.44483
3a	.49414	.11514	.12854	.58883	.12336	.12915
3b	.57579	.12636	.20002	.28512	.13001	.58791
3c	.20152	-.09792	.58334	-.24493	.27720	-.07852
4a	.49883	.06554	.52520	.20128	.11150	.16333
4b	.37069	-.15089	.20546	.16738	.56181	.15671
4c	.49650	.02659	.18798	.05249	.60370	.37986
5a	.55045	.72722	.18910	.18514	-.07026	.09578
5b	.71831	.23592	.69386	.31474	.15001	.12106
5c	.17188	.44254	-.03266	.14834	-.07646	-.17671
% OF VARIANCE		47.8	21.4	13.8	10.1	6.9

PHASE 2. MAIN STUDY : CORRELATION COEFFICIENTS (TEACHERS)

	1a	1b	1c	2a	2b	2c	3a	3b	3c	4a	4b	4c	5a	5b	5c
1a	1.00000	.10180	.03489	.03596	.14125	.01885	.37800	.04163	.03011	-.20351	.20324	-.16107	.20417	.01576	.00533
1b	.10180	1.00000	.41139	-.35083	.04235	.33026	.16322	.22053	-.03501	.10106	.19212	.15156	.60132	.35397	.36195
1c	.03489	.41139	1.00000	.07843	.17513	-.07753	.10720	.37356	.04211	.02458	.37722	.19234	.25935	.28037	.21200
2a	.03596	-.35083	.07843	1.00000	.32617	-.13663	-.01335	-.00283	-.00457	-.08260	-.14153	.06274	-.33170	-.20635	-.30567
2b	.14125	.04235	.17513	.32617	1.00000	.09068	.33542	.30170	.26551	.11641	-.08694	.05619	.15303	.02735	.28608
2c	.01885	.33026	-.07753	-.13663	.09068	1.00000	.33757	.23135	-.00792	.44334	-.05208	.08442	.26585	.06448	.16772
3a	.37800	.16322	.10720	-.01335	.33542	.33757	1.00000	.59168	-.07254	.17946	.37774	.00374	.36940	.24531	.25984
3b	.04163	.22053	.37356	-.00283	.36170	.23135	.59168	1.00000	.11439	.42168	.40621	.28837	.27717	.20596	.44871
3c	.03011	-.03501	.04211	-.00457	.26551	-.00792	-.07254	.11439	1.00000	.09624	-.18224	.07662	.08435	.14865	.11999
4a	-.20351	.10106	.02458	.08260	.11641	.44334	.17946	.42168	.09624	1.00000	.17603	.64798	.19219	.18985	.21168
4b	.20324	.19212	.37722	-.14153	-.08694	-.05208	.37774	.40621	-.18224	.17603	1.00000	.22208	.12876	.27983	.09534
4c	-.16107	.15156	.19234	.06274	.08442	.08442	.00374	.28837	.07662	.64798	.22208	1.00000	.30103	.15421	.16813
5a	.20417	.60132	.25935	-.33170	.15303	.26585	.36940	.27717	.08435	.19219	.12876	.30103	1.00000	.34809	.45110
5b	.01576	.35397	.28037	-.26585	.02735	.06448	.24531	.20596	.14865	.18985	.27983	.15421	.34809	1.00000	.26539
5c	.00533	.36195	.21200	-.30567	.28608	.16772	.25984	.44871	.11999	.21168	.09534	.16813	.45110	.26539	1.00000

PHASE 2: MAIN STUDY.

SUB-CATEGORIES (CRITERIA)	FACTOR ANALYSIS : (CRITERIA) TEACHERS.					
	PRINCIPAL FACTOR	VARIMAX ROTATIONS				
		1.	2.	3.	4.	5.
1a	.14404	.07765	.38950	-.26342	.05422	-.00659
1b	.58166	.75854	.06187	.02581	.15892	.01541
1c	.54216	.28662	.06907	.05283	.66050	.16105
2a	-.22970	-.56300	.06992	.00235	.16357	.32929
2b	.33691	-.03462	.38220	.04723	.08035	.72554
2c	.33135	.31220	.26080	.30098	-.36832	.03715
3a	.64825	.18507	.94025	.08340	-.00827	.03973
3b	.69844	.20870	.51642	.40304	.28181	.20922
3c	.09499	.06854	-.06623	.06022	-.00535	.35860
4a	.54311	.13257	-.09023	.94445	-.11578	.04627
4b	.46459	.11679	.40471	.20590	.57399	-.43733
4c	.42422	.13063	-.09206	.66980	.23575	.08968
5a	.66735	.73435	.19235	.10174	.07840	.14416
5b	.44456	.41105	.11012	.13034	.22759	-.00567
5c	.55096	.50654	.17531	.15777	.06980	.24684
% OF VARIANCE		42.7	17.0	16.7	12.6	11.0

PHASE 2. MAIN STUDY: CORRELATION COEFFICIENTS (TUTORS)

	1a	1b	1c	2a	2b	2c	3a	3b	3c	4a	4b	4c	5a	5b	5c
1a	1.00000	-.00181	.05462	.17944	.16057	-.07107	.39773	-.17938	.08022	-.09826	.08259	.20153	.09501	.25009	.41875
1b	-.00181	1.00000	.47765	.03175	-.17275	.10685	-.01017	.09234	-.02071	-.26687	-.08370	-.04854	.23171	.27539	.20428
1c	.05462	.47765	1.00000	.24633	.04309	.11668	.05513	.07635	.03906	.07563	.10905	-.07817	.60333	.38438	.27793
2a	.17944	.03175	.24633	1.00000	.18928	.20448	.30724	.29313	-.11489	.29585	.02211	.29223	.58389	.49089	.35817
2b	.16057	-.17275	.04309	.18928	1.00000	-.03071	.27174	.13036	-.09233	.44411	.10795	.38438	.11158	-.13052	.14580
2c	-.07107	.10685	.11668	.20448	-.03071	1.00000	.21770	.45110	.05610	.05786	.00800	.18931	.23406	.14239	.13813
3a	.39773	-.01017	.05513	.30724	.27174	.21770	1.00000	.22091	.03509	.22185	.03217	.13697	.25993	.17292	.06900
3b	-.17938	.09234	.07635	.27174	.13036	.45110	.22091	1.00000	.18109	.19963	.00801	.37359	.49949	.24473	-.12591
3c	.08022	-.02071	.03906	-.11489	-.09233	.05610	.03509	.18109	1.00000	-.03535	.04201	.04716	.10205	.26816	.04624
4a	-.09826	-.26687	.07563	.29585	.44411	.05786	.22185	.19963	-.03535	1.00000	.01357	.14584	.07666	-.08105	-.17504
4b	.08259	-.08370	.10905	.02211	.10795	.00300	.03217	.00801	.04201	.01357	1.00000	-.00309	.21088	.17429	.21529
4c	.20153	-.04854	-.07817	.29223	.38438	.18931	.13697	.37359	.04716	.14584	-.00309	1.00000	.22877	.07768	.08530
5a	.09501	.23171	.60333	.58389	.11158	.23406	.25993	.49949	.10205	.07666	.21088	.22877	1.00000	.49826	.26516
5b	.25009	.27539	.38438	.49089	-.13052	.14239	.17292	.24473	.26816	-.08105	.17429	.07768	.49826	1.00000	.43431
5c	.41875	.20428	.27793	.35817	.14580	.13813	.06900	-.12591	.04624	-.17504	.21529	.08530	.26516	.43431	1.00000

PHASE 2: MAIN STUDY.

SUB-CATEGORIES (CRITERIA)	FACTOR ANALYSIS : (CRITERIA) TUTORS.					
	PRINCIPAL FACTOR	VARIMAX ROTATIONS				
		1.	2.	3.	4.	5.
1a	.29423	-.05268	-.06404	.76256	.07687	-.04088
1b	.25672	.07438	.47592	.05816	-.26714	-.02977
1c	.57464	.02272	.91227	.10372	.07180	.05826
2a	.73961	.34944	.17041	.30277	.19114	.77023
2b	.24606	.02407	-.02887	.20443	.74793	.00251
2c	.33624	.45037	.08981	.00722	.00456	.05627
3a	.38114	.25560	-.00850	.32296	.28492	.07658
3b	.52921	.90319	.09002	-.16681	.16484	-.01612
3c	.11507	.25741	.03770	.14245	-.12123	-.28861
4a	.17662	.10475	-.01705	-.15000	.62441	.20024
4b	.16980	.02022	.12317	.18734	.06253	-.02063
4c	.33397	.37489	-.11873	.20845	.31377	.04196
5a	.80698	.50235	.56991	.21806	.11466	.25316
5b	.64226	.36369	.37025	.144597	-.25081	.21917
5c	.45353	-.01251	.25293	.61925	-.09178	-.16495
% OF VARIANCE		42.0	22.4	17.3	11.0	7.3

PHASE 2. MAIN STUDY : CORRELATION COEFFICIENTS (STUDENTS & TEACHERS)

	1a	1b	1c	2a	2b	2c	3a	3b	3c	4a	4b	4c	5a	5b	5c
1a	1.00000	.04459	.07473	-.00026	.22760	.04112	.26695	.07736	.11411	-.01262	.24733	-.00221	.07532	.03669	-.00573
1b	.04459	1.00000	.45225	-.18802	.07185	.31072	.12852	.17324	.03217	.14223	.02499	.12081	.58540	.28600	.30101
1c	.07473	.45225	1.00000	.16559	.14263	.22624	.17279	.33829	-.08057	.07623	.29184	.29033	.41551	.27701	.21378
2a	-.00026	-.18802	.16559	1.00000	.14632	.18447	.28084	.07755	-.06312	.10891	-.03046	.05379	.00941	.05516	-.12678
2b	.22760	.07185	.14263	.14632	1.00000	.29582	.26883	.38927	.18258	.33969	.15331	.25193	-.02868	.16950	.01963
2c	.04112	.31072	.22624	.18447	.29582	1.00000	.38638	.43906	-.00738	.37276	.12239	.17471	.28084	.22993	.11935
3a	.26695	.12852	.17279	.28084	.26883	.38638	1.00000	.40157	-.04446	.20604	.29704	.12736	.26175	.25569	.19984
3b	.07736	.17324	.33829	.07755	.38927	.43906	.40157	1.00000	.03022	.40369	.34920	.37984	.15110	.23872	.14165
3c	.11411	.03217	-.08057	-.06312	.18258	-.00738	-.04446	.03022	1.00000	.17944	.02881	.16002	.09149	.24704	-.04924
4a	-.01262	.14223	.07623	.10891	.33969	.37276	.20604	.40369	.17944	1.00000	.16217	.48373	.08742	.23910	.08153
4b	.24733	.02499	.29184	-.03046	.15331	.12239	.29704	.34920	.02881	.16217	1.00000	.31627	.03312	.24951	-.04700
4c	-.00221	.12081	.29033	.05379	.25193	.17471	.12736	.37984	.16002	.48373	.31627	1.00000	.10753	.15461	-.00100
5a	.07532	.58540	.41551	.00941	-.02868	.28084	.26175	.15110	.09149	.08742	.03312	.10753	1.00000	.39187	.42495
5b	.03669	.28600	.27701	.05516	.16950	.22993	.25569	.23872	.24704	.28910	.24951	.15461	.39187	1.00000	.22329
5c	-.00573	.30101	.21378	-.12678	.01963	.11935	.19984	.14165	-.04924	.08153	-.04700	-.00100	.42495	.22329	1.00000

PHASE 2: MAIN STUDY.

SUB-CATEGORIES (CRITERIA)	FACTOR ANALYSIS : (CRITERIA) STUDENTS & TEACHERS					
	PRINCIPAL FACTORS	VARIMAX ROTATIONS				
		1.	2.	3.	4.	5.
1a	.18839	.02643	-.02179	.08372	.51149	.11004
1b	.50237	.72640	.15144	-.02675	-.03180	.03126
1c	.56230	.49748	.44514	.07241	.15012	-.28720
2a	.14760	-.08714	.02447	.40327	.01493	-.12201
2b	.42157	-.00758	.26030	.38869	.17089	.26635
2c	.57140	.30493	.19125	.55432	-.03307	.06544
3a	.55903	.22255	.03502	.61860	.40416	-.02281
3b	.64266	.17000	.48838	.46461	.13259	.04692
3c	.13671	.03749	.07367	-.09582	.10879	.55043
4a	.53448	.07850	.46585	.39645	-.17408	.42810
4b	.41111	.00594	.48492	.05524	.51037	-.03384
4c	.47857	.05214	.66202	.11815	-.01863	.18509
5a	.54914	.82592	.00164	.05474	.06361	.04826
5b	.50609	.41059	.19602	.13614	.15914	.26269
5c	.30196	.48648	-.04367	.07082	-.01252	.00486
% OF VARIANCE		48.5	21.4	11.9	9.6	8.6

PHASE 2. MAIN STUDY: CORRELATION COEFFICIENTS (STUDENTS & TUTORS)

	1a	1b	1c	2a	2b	2c	3a	3b	3c	4a	4b	4c	5a	5b	5c
1a	1.00000	-.01165	.11121	.07427	.20416	-.01741	.21950	-.08930	.22973	.07697	.20855	.23306	.02961	.23115	.28510
1b	-.01165	1.00000	.46297	-.01162	.01335	.22962	.02889	.10715	.04059	.00639	-.12701	.02177	.38295	.21485	.19823
1c	.11121	.46297	1.00000	.23663	.09491	.27621	.15802	.22980	-.07443	.08076	.15814	.12023	.57693	.35007	.26402
2a	.07427	-.01162	.23663	1.00000	.15564	.32977	.42390	.23429	-.13005	.28724	.06981	.20186	.45296	.40442	.19704
2b	.20416	.01335	.09491	.15564	1.00000	.18482	.25187	.20657	.04671	.41302	.20000	.33463	.09471	.15494	.09102
2c	-.01741	.22962	.27621	.32977	.18482	1.00000	.31483	.46855	.02039	.19248	.14018	.19398	.29665	.25735	.13399
3a	.21950	.02889	.15802	.42390	.25187	.31483	1.00000	.27423	.01071	.20984	.11663	.19709	.21535	.22577	.11174
3b	-.08930	.10715	.22980	.23429	.20657	.46855	.27423	1.00000	.07038	.24237	.14218	.37463	.34069	.31167	-.04670
3c	.22973	.04059	-.07443	-.13005	.04671	.02039	.01071	.07038	1.00000	.11808	.16721	.14198	.09985	.30324	-.08712
4a	.07697	.00639	.08076	.28724	.41302	.19248	.20984	.24237	.11808	1.00000	.05631	.19557	.08965	.14037	-.06995
4b	.20855	-.12701	.15814	.06981	.20000	.14018	.11663	.14218	.16721	.05631	1.00000	.15538	.11823	.21244	.04337
4c	.23306	.02177	.12023	.20186	.33463	.19398	.19709	.37463	.14198	.19557	.15538	1.00000	.15303	.14119	.01809
5a	.02961	.38295	.57693	.45296	.09471	.29665	.21535	.34069	.09985	.08965	.11823	.15303	1.00000	.46124	.28466
5b	.23115	.21485	.35007	.40442	.15494	.25735	.22577	.31167	.30324	.14037	.21244	.14119	.46124	1.00000	.31991
5c	.28510	.19823	.26402	.19704	.09102	.13399	.11174	-.04670	-.08712	-.06995	.04337	.01809	.28466	.31991	1.00000

PHASE 2 : MAIN STUDY.

SUB-CATEGORIES (CRITERIA)	FACTOR ANALYSIS : (CRITERIA) STUDENTS & TUTORS					
	PRINCIPAL FACTOR	VARIMAX ROTATIONS				
		1.	2.	3.	4.	5.
1a	.25942	-.00940	.22232	.01725	.26145	.63208
1b	.33385	.67062	-.01649	-.09775	-.00282	-.00173
1c	.58053	.71170	.12308	.15697	-.01833	.11753
2a	.61633	.10953	.24052	.80912	-.08317	.05718
2b	.38460	.02052	.63555	.01266	.00564	.18303
2c	.53059	.32935	.37115	.27388	.03247	-.16711
3a	.46653	.07424	.38673	.37120	.00921	.10456
3b	.54796	.27324	.50005	.22386	.17570	-.39490
3c	.14598	-.01753	.08009	-.10462	.69510	.02858
4a	.33312	-.01790	.48146	.14150	.04999	-.03669
4b	.25161	.01928	.23018	.07912	.24331	.13202
4c	.38691	.06408	.50751	.06312	.15440	.03661
5a	.68429	.64237	.08626	.44032	.16068	-.00644
5b	.64416	.37170	.12081	.42790	.46171	.16411
5c	.32974	.33211	-.04213	.21068	-.03583	.44521
% OF VARIANCE		47.8	18.6	14.5	11.3	7.8

PHASE 2. MAIN STUDY: CORRELATION COEFFICIENTS (TEACHERS & TUTORS)

	1a	1b	1c	2a	2b	2c	3a	3b	3c	4a	4b	4c	5a	5b	5c
1a	1.00000	.07835	.0981	.06285	.18970	.02270	.32736	-.02271	.03493	-.09643	.18123	-.01584	.11391	.04458	.07334
1b	.07835	1.00000	.43417	-.16746	-.04000	.22098	.07794	.15462	-.02974	-.06924	.08231	.05522	.39263	.29595	.26912
1c	.01981	.43417	1.00000	.17221	.05745	.01641	.08772	.20396	.04261	.02905	.23451	.02888	.48027	.34891	.25953
2a	.06285	-.16746	.17221	1.00000	.21589	.04422	.15333	.16030	-.01593	.11410	-.06850	.18379	.18664	.18792	.05231
2b	.18970	-.04000	.05745	.21589	1.00000	.08684	.25743	.21384	.06216	.37116	.04768	.27544	.05188	-.12867	.10728
2c	.02270	.22098	.01641	.04422	.08684	1.00000	.25115	.35326	.02046	.25425	-.00445	.16386	.21272	.07601	.11151
3a	.32736	.07794	.08772	.15333	.25743	.25115	1.00000	.38999	-.01775	.16855	.21049	.06107	.31879	.21845	.17834
3b	-.02271	.15462	.20396	.16030	.21384	.35326	.38999	1.00000	.14840	.28531	.20905	.33560	.40037	.22525	.12769
3c	.03493	-.02974	.04261	-.01593	.06216	.02046	-.01775	.14840	1.00000	.01879	-.08664	.05655	.09627	.21226	.08665
4a	-.09643	-.06924	.02905	.11410	.37116	.25425	.16855	.28531	.01879	1.00000	.11819	.37452	.07665	-.01628	-.05486
4b	.18123	.08231	.23451	-.06850	.04768	-.00445	.21049	.20905	-.08664	.11819	1.00000	.12210	.14577	.19970	.12404
4c	-.01584	.05522	.02888	.18379	.27544	.16386	.06107	.33560	.05655	.37452	.12210	1.00000	.23116	.08292	.09138
5a	.11391	.39263	.48027	.18664	.05188	.21272	.31879	.40037	.09627	.07665	.14577	.23116	1.00000	.45351	.36755
5b	.04458	.29595	.34891	.18792	-.12867	.07601	.21845	.22525	.21226	-.01628	.19970	.08292	.45351	1.00000	.38251
5c	.07334	.26912	.25953	.05231	.10728	.11151	.17834	.12769	.08665	-.05486	.12404	.09138	.36755	.38251	1.00000

PHASE 2: MAIN STUDY.

SUB-CATEGORIES (CRITERIA)	FACTOR ANALYSIS : (CRITERIA) TEACHERS & TUTORS.						
	PRINCIPAL FACTOR	VARIMAX ROTATIONS					
		1.	2.	3.	4.	5.	6.
1a	.18483	.08405	-.08186	.55751	-.11455	.06436	.09042
1b	.46123	.71070	.02234	.05092	.00270	-.34787	-.07438
1c	.53316	.68129	.05338	-.03252	.04757	.15665	.18754
2a	.25581	.06148	.17717	.10008	.15413	.57030	-.08920
2b	.27019	.02584	.48827	.29041	-.23043	.26736	-.03889
2c	.35990	.10991	.39184	.17444	.23338	-.25623	-.20679
3a	.51572	.08343	.24006	.65556	.24183	.01054	.09514
3b	.59968	.17809	.53558	.16553	.38070	-.04927	.08691
3c	.11878	.04056	.03567	-.01722	.20205	.02447	-.02919
4a	.27967	-.07027	.67998	-.03148	-.01109	.05366	.08414
4b	.32533	.15490	.12627	.17783	.00118	-.08253	.61499
4c	.35006	.08614	.53128	-.04462	.08574	.11882	.06005
5a	.72135	.60254	.19298	.17223	.37259	.08830	.03638
5b	.56038	.44350	-.07159	.05464	.56287	.13077	.20478
5c	.42534	.40383	.00947	.14628	.21248	.05326	.04763
% OF VARIANCE		42.6	22.0	11.5	9.6	7.6	6.7

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